

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1624.—VOL. XXXVI.

London, Saturday, October 6, 1866.

STAMPED ... SIXPENCE.
UNSTAMPED.. FIVEPENCE.

MR. JAMES CROFTS, STOCK AND SHAREBROKER,
No. 1, FINCH LANE, CORNHILL.
(Established 23 years.)

Mr. CROFTS solicits orders for the shares mentioned in his letter, on p. 641, in this day's Journal, the state of the market being highly in favour of buyers, and viewing the present state of prices as quite of a temporary character, it will be found, as Mr. CROFTS asserts, that "the enumeration of the shares in his said letter, taking unquestionable rank amongst the cream of the market, the most uninitiated spectator can scarcely go astray in operating at once; but Mr. CROFTS, if appealed for his advice as to the selections to be made, will give it (as is his custom) free from any bias or interest in the mines themselves." [Vide letter.]

Bankers: National Bank of Scotland, Finch-lane.

MR. LELEAN, ENGLISH AND FOREIGN STOCK AND
SHAREDEALER,
11, ROYAL EXCHANGE, LONDON, E.C.

Bankers: Robarts, Lubbock, and Co., Lombard-street.

GUIDE TO INVESTORS.—MR. LELEAN'S STOCK, SHARE, AND FINANCE REGISTER for October (published on Wednesday last) contains the third of a series of articles on the whole circle of Investments—British and Foreign Stocks and Loans, Bank and Finance, Railway and Insurance, Gas and Water, and Manufacturing and Commercial Shares; with other information as is necessary to guide intending Investors amidst the shoals and quicksands of the multifarious species of Investments that now present themselves; and a tabulated statement of the capital, value of shares, liabilities and assets, and the ratio between them; reserve fund, &c., of thirty-eight joint-stock banks. Published by Pottie and Son, 14 and 15, Royal Exchange, London, E.C.

Price 6d., or 5s. annually.

JOINT-STOCK BANKS.—A tabulated summary of the financial statistics of thirty-eight joint-stock banks, including subscribed and paid capital, liabilities, assets of various descriptions, reserve fund, dividends, &c., constitutes a very valuable item in Mr. Lelean's "Stock, Share, and Finance Register" for October, published on Wednesday last. There is, in addition, the usual reviews of the monetary and commercial affairs of September, and a notation of all the dividends paid by joint-stock companies in August and September.—11, Royal Exchange, London, E.C.

NOTICE OF REMOVAL.—GEORGE RICE, SHAREDEALER, No. 5, Cowper's-court, Brixton-lane, London, has REMOVED to 78, OLD BROAD-STREET, LONDON (close to the Stock Exchange).

GEORGE RICE, SHAREDEALER, 78, OLD BROAD STREET, LONDON, E.C. (24 years' experience), Member of the Mining Exchange), DEALS in MINING SHARES at close market prices of the day, either as BUYER or SELLER, for cash or account. The following are the latest market prices:—

Clifford	£ 9 - £ 9 1/2	East Russell	£ 3 1/2 - £ 3 5/8
Chiverton	3 1/2 - 4	Frontino	9s - 10s
Chiverton Moor	4 1/2 - 5 1/2	Great Vor	19 1/2 - 20
Chontales	3 - 3 1/2	Marke Valley	4 1/2 - 4 3/8
East Bassett	20 - 21	North Treskerby	3 - 3 1/2
East Caradon	6 - 6 1/2	Prince of Wales	21s 6d. - 22s 6d.
East Carn Brea	2 1/2 - 2 3/4	St. John del Rey	47 - 48
East Grenville	1 1/2 - 2	West Chiverton	60 - 61
East Lovell	9 - 9 1/2	Wheat Grenville	14 1/2 - 15 1/2

There are some low-priced shares in the above list which should be bought immediately for a rise, whilst there are others which have attained a high figure should be sold at once.

Money advanced on mining shares.

Bankers: Bank of England.

JAMES D. GENN AND CO., STOCK AND SHAREDEALERS, 3, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.

MR. G. D. SANDY, STOCK AND SHAREDEALER, No. 48, THREADNEEDLE STREET, LONDON, E.C., TRANSACTS BUSINESS in EVERY DESCRIPTION OF STOCK EXCHANGE SECURITIES, MINING and FINANCIAL ENTERPRISES, at close market prices.

Correct Daily Price List may be had on application.

Money advanced to any amount on legitimate stocks and shares.

References exchanged.

MR. G. D. SANDY'S INVESTMENT CIRCULAR.—SPECIAL NOTICE.—Vide all hitherto published.

48, Threadneedle-street, London, E.C., Oct. 5, 1866.

MESSRS. WILSON, WARD, AND CO., STOCK AND SHAREDEALERS, 16, UNION COURT, OLD BROAD STREET, LONDON, E.C.

Messrs. WILSON, WARD, and Co. are DEALERS in the FOLLOWING SHARES, at market prices: Frontino and Bolivia Gold, Great Laxey, Caldbeck Fells, Penhal and Lomax, New Wheal Towan, and North Treskerby. Can recommend two good mines for investment. Their fortnightly Circular may be had on application.

NOTICE OF REMOVAL.—MCNEILL and LONG have REMOVED from 7, Pope's Head-alley, Lombard-street, to 31, THREAD-NEEDLE STREET, LONDON, E.C.

MESSRS. MCNEILL AND LONG, STOCK, SHARE, AND MINING DEALERS, 31, THREADNEEDLE STREET, LONDON, E.C.

Bankers: Alliance Bank.

MR. T. ROSEWARNE, 81, OLD BROAD STREET, LONDON, E.C., is a DEALER in the FOLLOWING SHARES, for cash or "time on,":—

Prince of Wales.	East Lovell.	South Frances.
Marke Valley.	Caldbeck Fells.	East Carn Brea.
Wheat Rose.	West Kitty.	North Downs.
North Treskerby.	Wheat Agar.	Stray Park.
Wheat Seton.	Frontino.	East Russell.
Chontales.	Chiverton Moor.	Great Vor.
West Caradon.	Providence.	Grangler.
West Chiverton.	Grenville.	Great North Laxey.
Butler.	South Grenville.	Drake Walls.
Crebor.	East Grenville.	Devon Consols.
Clifford.	East Grenville.	

PRINCE OF WALES.—The lode is still worth 30s. per fm., and likely for a further improvement. The mine is opening out splendidly, and I would say to all my friends to double their interest at once at present price. There are several other lodes of great importance to be intersected shortly, and if cut good I should not be at all surprised to see the shares at £10 per share, and to dispel any doubts would advise them to send their own agents to inspect it.

Money advanced on marketable mining shares.

Office hours, Ten till Four.

Bankers: Bank of England, and Consolidated.

MR. JAMES H. HUME, 74, OLD BROAD STREET, LONDON, E.C. (Member of the Mining Exchange), Orders executed in all descriptions of mining shares and other stocks at nett prices, equivalent to 1 1/4 per cent. commission.

Mr. HUME's "Circular" for October will be forwarded on application.

Mr. HUME's attention having been called to a share-dealer's circular, advertised in last week's "Mining Journal," containing a garbled statement, purporting to have been extracted from "a private circular," and used evidently for the furtherance of the peculiar objects of the advertiser, who displays an interest in quashing the free expression of opinion, Mr. HUME begs to say that his circulars contain nothing that cannot be vouched for, and he strongly recommends all who are interested to procure copies, which will be forwarded on application, and judge for themselves.

Bankers: The London Joint Stock Bank.

MR. GEORGE BUDGE, NO. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 18 years), has FOR SALE at nett prices:—2 Minerals; 200 Gwydyr Park, 1s. 6d.; 50 South Callington; 50 Redmoor, 6s. 6d.; 1 Wheat Seton, £162; 20 East Carn Brea, £23s.; 40 Wheat Agar, £1s.; 100 Mineral Rights, 13s.; 100 Hollybush, £2s.; 30 Quodrada, £1s.; 70 Great South Toliog, 3s. 9d.; 80 New Treleigh, 12s.; 10 Grangler and St. Aubyn, £5s.; 30 Gwanton, £3s.; 10 East Lovell, £2s.; 200 Chontales; 5 Tincroft, £10s.; 100 Anglo-Brazilian, 9s. 6d.; 50 East Grenville; 5 St. John del Rey; 50 North Chiverton; 100 East Chiverton, 29s. 6d.; 25 Frank Mills, £2 18s. 9d.; 40 Prince of Wales; 10 Don Pedro; 1 Devon Great Consols; 20 Marke Valley; 150 Dale, 2s. 9d.; 50 Carn Camborne, 28s.; 17s. Frontino and Bolivia; 100 South Grenville, 5s. 6d.; 50 South Herodfoot; 70 Lady Bertha; 20 South Condurrow; 5 Great Vor; 60 Great Retallack, 11s.; 100 Alamillo.

SPECIAL BUSINESS in Linares, Fortuna, Port Phillip, St. John del Rey, Devon Great Consols, Minera, Vallanasa, and South Callington.

WEEKLY MINING CIRCULAR AND SHARE LIST—
SYNOPSIS OF CORNISH AND DEVON MINES, &c. (No. 391, Vol. VIII), contains important information on the following mines:—

West Caradon.	South Caradon.	Wheat Seton.
Devon Great Consols.	Great Wheal Vor.	West Chiverton.
Clifford Amalgamated.	East Caradon.	East Carn Brea.
Wheat Treskerby.	Wheat Mary Ann.	East Bassett.
Chiverton Moor.	North Treskerby.	Hington Down.
Prince of Wales.	Tincroft.	West Wheal Russell.
Wheat Butler.	Marke Valley.	Wheat Chiverton.
East Wheal Lovell.	Grangler & St. Aubyn.	Trumpet Consols.
New Wheal Seton.	Frank Mills.	

Remarks on the Stock and Share Markets, Mining Share Market, and the Metal Market, &c.

Mr. PETER WATSON has been in Cornwall and Devon during the past seven to eight weeks, visiting and obtaining general information respecting most of the leading dividend and progressive mines. Yesterday's (Friday) "Weekly Mining Circular," No. 391, contains important information on the above mines, which will be forwarded by post on application, price 6d. each copy.

Mr. PETER WATSON returned to business (London) this week, and is in a position to advise with his customers and others as to purchases or sales of Cornish and Devon Mines shares.—79, Old Broad-street, London, E.C.

Price 6d., or 5s. annually.

THE LONDON DAILY RECORD—STOCK AND SHARE LIST.—MR. PETER WATSON begs to call particular attention to the fact that nearly all the afternoon or evening London newspapers contain the prices of stocks and shares up to about One o'clock only (on same day as published), instead of Four to Five o'clock. The difficulties which shareholders and the investing public have encountered in seeking for correct and latest daily prices induced him, three months ago, at the suggestion of several of his friends and customers, to publish every evening "The London Daily Record—Stock and Share List," which is ready at about Half-past Five o'clock, and delivered to subscribers in and around London the same evening. It is posted in time for the same evening's mail to country subscribers, who are thus enabled to get the latest prices some eight or ten hours earlier than they formerly had the means of doing. The importance of this at the present anxious moment must be obvious to all, as the daily fluctuations in prices of railway stocks, banks, financial, and other shares are sometimes very great.

It is his constant endeavour to convey the best and most reliable information (derived from authentic sources), and to give the latest actual marketable prices of buyers and sellers. Every person, therefore, interested in stocks and shares will find it to their interest to subscribe to "The London Daily Record—Stock and Share List." Those who desire to have it sent to them regularly every evening, will please sign the annexed form, and forward to Mr. PETER WATSON, 79, Old Broad-street, London, E.C.

Annual subscription, £1 1s.; by post, £2 5s. Monthly subscription, by post, 4s. Single copy, 1d.; by post, 2d.

THE LONDON DAILY RECORD—STOCK AND SHARE LIST.

Please put my name down as a subscriber to the above Daily List, and forward the same to me, for* Name Address Date * Here insert weeks or months.

To Mr. PETER WATSON, 79, Old Broad-street, London, E.C.

STOCK AND SHAREDEALER.—MR. PETER WATSON, ENGLISH AND FOREIGN STOCK, SHARE, and MINING OFFICES, 79, OLD BROAD STREET, LONDON, E.C.

Railway, Joint-Stock Banks, Dock, Insurance, Canal, Mining, Steam-ship, &c., and every other description of shares bought and sold at nett prices.

TELEGRAPHIC MESSAGES TO BUY OR SELL Railway, Bank, Mine, and other shares and stocks, punctually attended to, at nett prices for cash, or for fortnightly settlements, with advice as to purchases or sales.

Twenty-two years' experience.

(Two in Cornwall and Twenty in London.)

Bankers: The Alliance Bank, and the Union Bank of London.

MR. EDWARD COOKE, STOCK AND SHAREDEALER, 2, CROWN CHAMBERS, THREADNEEDLE STREET, E.C.

Is a BUYER or SELLER of Treaseyan, East Lovell, Great Vor, Clifford, Tincroft, North Treskerby, Chontales, Marke Valley, East Caradon, Credit Foncier, Anglo-American, Atlantic Telegraph, and American securities, at the current prices of the day. Telegraphic messages promptly attended to.

Satisfactory references given in any town in the United Kingdom.

Bankers: Alliance Bank, Lothbury.

MR. C. A. POWELL, SHAREDEALER, 78, OLD BROAD STREET and MINING EXCHANGE, LONDON, E.C.

Business transacted in the PURCHASE or SALE of SHARES at nett prices for cash or for the fortnightly settlement.

Oct. 5, 1866.

Bankers: Bank of England.

CALDBECK FELLS, FRONTINO AND BOLIVIA, CHONTALES, MINERAL RIGHTS.—Parties wishing to BUY or SELL in either of the above will find a ready medium for the negotiation of their business by applying to Mr. C. A. POWELL, 78, Old Broad-street, London, E.C.

MR. WILLIAM SEWARD, STOCK AND SHAREDEALER, 19, THROGMORTON STREET, LONDON, E.C.

STOCK AND SHAREDEALERS, CUSHION COURT, OLD BROAD STREET, CITY, E.C.

Closing prices, Friday, Oct. 5.

Buyers. Sellers.

Clifford £ 8 1/2 - £ 9 1/2

Chiverton Moor 5 - 5 1/2

Chontales 3 - 3 1/2

East Bassett 21 - 22 1/2

East Lovell 9 1/2 - 10

East Russell 3 1/2 - 3 1/2

Frontino 9s - 11s

Original Correspondence.

THE NEW PUDDLING FURNACES AT THE MILTON AND ELSECAR WORKS.

SIR.—A correspondent in the *Mining Journal* of Sept. 22, who signs himself "P. T. M." finds fault with the favourable notices I have on several occasions given to Wilson's Patent Furnaces, now being worked at Milton. He also states that my opinion is either the result of "inventorial coaching," or from having taken exceptional cases as the average production of the furnaces. In answer to those remarks, permit me to say that my opinions have been formed entirely from personal observation at the works alluded to. In common with many others, I have long taken deep interest in all inventions having for their object the consumption of smoke, and so far I have seen none more likely to accomplish that desirable blessing, at a small cost, than the patent of Mr. Wilson. That gentleman has spent upwards of 20,000*l.*, and devoted four years of his life to a series of experiments for the purpose of inventing a process which would leave our large towns and ironworks in a much healthier condition than they are at present. Having succeeded in his endeavours, I consider the invention is of national importance, and am rather surprised that it has not been taken up more generally by our ironmasters than it has been so far. Still the progress of most inventions on existing things is generally slow at first, but once taken up, and proved a success, its general adoption is secured; and that such will be the case with Mr. Wilson's furnaces I have not the least doubt. Nearly every practical man who has visited Milton has left with that opinion, so that I am not alone in meting out approval of a very important invention.

The Smoke Question is continuously brought before the public, and the inventions of various persons have been carefully gone into. Jukes's furnaces are considered good, but they are rather costly; whilst those of Mr. Wilson, being simple in construction, can be put up at a very trifling cost. By their adoption, large towns, like Sheffield, Leeds, Manchester, &c., might have a clear atmosphere, not looking for the sun as a phenomenon, but daily expecting it as the bright luminary of light, health, and happiness. Whilst at Milton some time since, I was informed by Mr. George Dawes—one of the most energetic gentlemen connected with the iron trade in the kingdom—that he was so satisfied of the great benefit conferred on the employer and the workman by the furnaces of Mr. Wilson, that he was determined, despite all opposition, to have them put up at both Milton and Elsecar. I am, therefore, of opinion that Mr. Dawes, fully alive to his own interest, is a much better authority to swear by than "P. T. M.," who, as far as I am aware, has not even seen the furnaces at work, and evidently takes his cue from the workmen, who look upon all inventions as innovations, intended for their injury, who have up to the present time worked the furnaces most unwillingly. What could be done by willing workmen will yet be seen. That the furnaces are especially adapted to improve the sanitary condition of the workman, by giving him a cooler atmosphere in which to work, whilst, at the same time, there is perfect combustion of fuel, no smoke or ashes, and very little refuse, can admit of no doubt. It is for these reasons, Sir, that I have given prominence to the invention of Mr. Wilson, the general adoption of which I believe to be a mere question of time.

Before concluding, permit me to notice a fact in connection with the furnaces, of which I was informed a day or two since by one of the heads of the works at Milton. A gentleman from Sheffield went to Milton to see one of the furnaces at work, and patented what he called an improvement, but which a leading journal pitifully described as "not new." If "P. T. M." knows of any furnace in work in Sheffield superior to Wilson's, I should be most happy in having a look at it. I may say that I have only once seen Mr. Wilson, and that after I had noticed his patent.—Oct. 3. YOUR CORRESPONDENT.

MANUFACTURE OF COPPER BY ELECTRICITY.

SIR.—The fear of our coal fields becoming exhausted has caused a large number of propositions of various kinds to be put forward for doing without fuel, or, more correctly speaking, of substituting indirect processes for the direct ones now in use, for in most instances if the absolute quantity of carbonaceous fuel be calculated, it will be found that the improved processes involve a considerably larger consumption. This remark is especially applicable in the case of inventions which propose to substitute electricity for coal in the extraction of metals from their ores. In isolated cases the greater purity of the product may compensate for the additional expense, but it is in isolated cases only. The invention of Mr. J. B. Elkington, of Birmingham, is one of this class, and but that the name leads one to suppose thorough knowledge of electro-metallurgy the process would certainly be at once condemned.

The perusal of Mr. Elkington's specification gives rise to several questions, to fully comprehend which it will be necessary briefly to describe the process. The copper-smelting process is carried as far as the production of regulus or blister metal; and in place of the ordinary process of refining, Mr. Elkington proposes to resort to magneto-electric deposition. He connects, in an ordinary bath, the unrefined plates (rolled to $\frac{1}{4}$ in. in thickness) with the negative pole, and to the positive pole he attaches pure copper-plates 1.32d of an inch thick, upon which the pure copper from the unrefined plates is deposited. Now, the question naturally suggests itself—How will Mr. Elkington deal with the deposited copper, which, if I do not mistake, will be somewhat in the form of an extremely friable sponge? If he melt it, the almost absolute purity secured by the electric deposition will be lessened, yet it is doubtful whether, even to obtain the purity of electro-deposited copper, purchasers would consent to their orders being delivered in sponge or powder. But this is not all, for Mr. Elkington tells us that he removes the silver, gold, tin, and antimony, often present; and, as, in the opinion of many intimately connected with the copper smelting business, the presence of certain metals other than pure copper enhances the market value of the resulting article, much information is necessary to prove that the ingenuity of the invention is not unslued by that necessary proportion of utility for ensuring its general introduction.—Birmingham, Oct. 2. H. M.

MECHANISM IN TIN MINES.

SIR.—"A Cornish Miner" seems to have been at sea when he wrote his last week's lucubration on this subject. He says that he has marked the progress of improvement for forty years. Will he be kind enough to point out what effective improvements in tin dressing were introduced previous to the last six years? If so, perhaps he will tell us how much saving of cost had been effected by such improvement. "A Cornish Mining" seems fond of contending that which has never been or is likely to be disputed, that "that is no improvement which will not save cost and save the tin also." Who said it was? Are there many now living dolts enough to make such a statement? Before "A Cornish Miner" had felt himself called upon to contend a point, would it not have been well for him to have ascertained that there were such a point for contention? "A Cornish Miner" seems to be five or six years behind the world's age, inasmuch as he mentions a mine where, thirty years ago, the tin was dressed without loss, and that five or six years ago, with the present new style of dressing, much of the tin was lost. Will "A Cornish Miner" kindly say where he saw the present new style of dressing five or six years ago? The dressing arrangements five or six years ago might have been inferior to the mode prevailing thirty years previously in the important item of saving tin! Tin-dressing seemed to have been in a state of transition—from hand-labour to extensive employment of machinery; all the machinery was imperfect, and imperfect machinery always entails loss. Skilled labour was not to be obtained to fulfil the requirement consequent on extended mining operations, and there cannot be any wonder at much tin having been lost. "A Cornish Miner" repeats that he is as much in favour of improvements in tin-dressing as any man. Why, then, does he, by jumbling the present mode of dressing tin with that in use five or six years ago, ignore all improvements that have been introduced between those two periods, wherein greater changes have been effected than during the whole of the tin-dressing ages? We may say greater changes truly, inasmuch as while the dressing costs have been very

greatly reduced during that period, more tin has been saved from running off with the waste than could have been saved even then or at any time previously. "A Cornish Miner" seems content with lying down and crying "Give, give us a better price for tin." It is well to find that other Cornish miners are not so slothful, that they are generally more fully alive to what is required of them—to endeavour to lessen the cost of production.

"A Cornish Miner" says that the archimedean screw referred to is doing nothing more than the plunger-lift is doing in other mines. Will he kindly tell us in what one mine we can see the plunger-lift lifting all the sand from the stamps? If so, we can then ascertain the difference in cost of the two modes. "A Cornish Miner" says that if the floors were properly laid out at the beginning no lifting would be required. This would have been true, if at every place where tin floors had to be laid out there had been sufficient fall in the natural sloping of the ground. But sometimes tin floors have to be laid out on flat ground; could "A Cornish Miner," then, dispense with all means of lifting the stuff? Once more, will "A Cornish Miner" point out one mine where the tin-dressing floors have been laid out properly? If so, we would be glad to go to examine such, and accord the clever designer his due meed of praise. If "A Cornish Miner" will descend to reply to these points, we will then proceed to discuss other points on which we may be at issue.

Oct. 3.

A MINING ENGINEER.

TIN DRESSING, AND STONE BREAKING.

SIR.—At this time, when tin dressing is occupying a considerable share of public attention, and challenging the utmost skill of the most skilful, it is to be presumed that any suggestion which may tend in any way to hasten the solution of the question of cheap and effective dressing must be welcome to all interested. It is under this impression that I wish to offer few remarks and a suggestion or two on the subject. It may be uttering a truism to remark that the great aim of tin dressers is to separate the tin from the waste as quickly and as cheaply as possible, and I think I may safely premise that the means employed for this end, including even the latest introduced, are very far from satisfactory, certainly very far from perfect, though it cannot be denied that some of the recent introductions may fairly claim the credit of being called improvements. Among these, I think, it will be generally admitted that Mr. E. Borlase's revolving distributor occupies the first place. Though it may not be so generally admitted, what I nevertheless venture to express as my opinion, that this revolving distributor has almost, if not quite, exhausted the capabilities of the budle, from the perfectly uniform distribution of the stream flowing in from the stamps; yet, for all that, the budle is far from being a perfect tin separator, and, I think, will ever remain so, from the very nature of the budling process. Before noticing that process particularly, let us look for a moment or two at the principles and agencies at work in the dressing of tin ores. The only agent which it is necessary for our present purpose to mention is water. Leaving alone the chemical agents—fire and acids,—which it is not necessary for our present purpose to mention, the only agent employed in the actual separation of the tin from the waste is water. Dispensing as far as possible with technical terms, I would say at once, then, that the particles of tin and waste being held in temporary suspension by water the particles of tin being heaviest sink first. That being the case, what should be the aim of the tin dresser? Evidently it should be the perfect adaptation of his mechanical appliances to the operations of that law, or, in plainer terms, he should labour to give each particle a fair chance to find its proper place. For illustration, we will suppose we have a vessel filled with water in motion, and holding in suspension millions of particles of tin and waste, everyone of which is, of course, heavier than the element in which it floats, the tendency of each particle would be to sink, and its sinking capacity, so to speak, would depend on its weight, and the motion of the water which held it up. Under the most favourable circumstances, the heaviest tin would find the bottom first, and so on in perfect gradation, until the waste finally settled down on the top.

I fancy I hear some tin dresser say "I should like to see it," and, doubtless, that is the great desideratum of tin dressers—to effect a perfect separation in one process. Whether such a consummation is possible I leave to the consideration of the intelligent mining public of Cornwall and the sister county, while I proceed to notice some of the prevailing modes of tin dressing now in operation, and to offer a suggestion or two, which, of course, are freely open to any amount of fair criticism or actual trial.

The two prevailing methods resorted to in the dressing or cleaning of tin are that of the budle and that of the kieve. I say two, for the wooden frame is essentially the same as the budle, the difference being that while in the frame each successive layer is washed off as soon as deposited, in the budle each layer is deposited on the preceding one; and here allow me to say, once for all, that I believe the whole race of frames is doomed at no very distant period to final banishment from the stamps-floors, since even the budle does the work much cheaper. But I said that the budle was in its very nature imperfect, and I now proceed to show what appears to me to be the reason why. In the budling process, the particles of tin and waste, mingled in inextricable confusion, are hurried down pell-mell over an inclined plane, and many a particle of waste, which should have found its way to the tail among the vile refuse, seats itself at the very head among its betters, and gets so firmly settled there that it defies every succeeding wave to displace it, while many a particle of tin finds itself thrust among the scum of the budle in the neighbourhood of the tail, and has to be thrown up among the vile waste to take its chance again, and perhaps again. Anyone who has seen a section of a budle of "stuff" must have seen seams of waste near the head and seams of tin far below. The particles of waste have not a fair chance to free themselves from the tin and float to their destined quarters.

From the budle we turn to the kieve, and here the case is very different. Here the particles fairly float, and can be kept floating at the will of the operator, who can command his machinery at pleasure, and cause his particles to sink or swim. By the perfect adjustment of his machine he can cause the precious mineral to deposit itself comparatively uncontaminated by rubbish, and the waste to float in ascending circles till it is cast clear away. This may seem a little too fanciful, but I don't know why it should. If a revolving fan, say in the shape of the screw of a steamboat, were placed in the bottom of a kieve, filled with water and "stuff," and made to revolve just rapidly enough to allow the particles of tin to sink, of course the revolving wave, so to speak, would be less violent as it reached the top, and the tin certainly would rise in the water but a very little way, even the lightest of it, while the waste, from its lesser weight, would float above it and over the side of the kieve. That a perfect separation could be effected in this way under all circumstances, and in a single process, I don't pretend to say. Treatment will often have to be modified according to circumstances, but it is my decided conviction that if the stream from a stamps were made to flow into a circular vessel or pit, with such a revolving fan as I have mentioned, the separation would be effected with much less trouble and expense than by the best budle which was ever constructed or ever will be. If the kieve can be trusted for the last process, then why not for the first? If the heaviest of the waste can be separated from the tin there, then why not the lightest? If such a machine should be constructed, I would suggest that the stream from the stamps should be made to flow through a pipe placed in the centre of the kieve or pit, and to fall from the pipe a few inches from the bed of tin at the bottom. Of course some simple contrivance would be necessary to raise the pipe and the fan to keep them clear of the rising bed of tin. In that case the descending tin would not interfere with the rising waste, but would be quietly deposited at the bottom, as the stream flowed in.

Another suggestion, and I have done. It seems to me very strange that mining engineers have made so little use of steam-power for the breaking of stones, instead of the slow and expensive mode of "spalling" by hand. I can see no reason why the existing steam-power could not be made available for breaking stones in most mines, as well as for pumping, drawing, and stamping, and that with a very little extra expenditure of force, since a single stamp-head, properly fixed, would do the work of a dozen hammers, and never get tired. The adoption of such a mode of stone-breaking in the mines of the

two counties would, I am convinced, effect a saving of several hundred pounds per month.

M. ANTHONY.

Lelant, Cornwall, Sept. 28.

PROOF OF SLATES BY FIRE.

SIR.—When Mr. Harvey has answered the questions put to him on Sept. 8, it will be time enough to answer his of the 29th. Indeed, if time and your space permitted me to make extracts, they would be found to have been pretty well answered in the *Journal* by anticipation. If, however, he should ask for further answers, I will give them, but they will be accompanied by further questions to him. These will include one, at least, as to the change of colour iron effects after slates have been short time exposed to the atmosphere, as alluded to in a former letter of mine, and also as to the crooked nature of the deposit of some slate veins, running either across or with the split. But we shall not be in haste to do this, as correct quarry accounts are of much more consequence, and so have a more prominent claim for consideration.

CAMBRIAN.

THE SLATE TRADE IN THE UNITED STATES—No. IV.

SIR.—As the time and expense attending the opening of slate quarries depend in a very great degree upon the situation and inclination of the deposit, I propose in this communication to describe the position of the slate rock mentioned in my former letters. This problem in geology is full of information and instruction of the highest importance. Whilst the magnitude of the science is keenly contemplated, and its philosophy often aptly defined, by the scholar, lessons of a practical and comprehensive nature are within reach of, and often are best understood by, the man who combines thought with labour in grappling with the intricate and successive changes so often met with in opening up this increasing commodity. If the labourer, while at his daily employ, would treasure up the information that Nature's records disclose, the science of geology would be more generally known, and its great advantages more highly prized. In the judgment of the thoughtful quarryman the situation and inclination of a slate vein are of great importance. The first consideration should be the strength and quality of the metal; the second, the facilities for quarrying and preparing it for the market. The cleavage in the Chapman Quarry, mentioned in my first letter, on the Bond range, lies at an angle of about 12° , allowing the burthen easily to divide from the main body by blasting. In this respect it has an advantage over the flat rock, and also in keeping the quarry comparatively free of water, which quickly finds the lowest ground, and is drawn off without inconveniencing the different parts of the works. A bed of slate rock, with this inclination, I never knew to be cut up by (to use the quarryman's terms) *slides*, *false joints*, or *slants*, having about a fair proportion of side and back joints. This quarry has two leading *end joints*, nearly across the grain, which form the boundary of the present working, the one being about perpendicular, the other underlying the top at an angle of 10° . The value of these joints cannot be well calculated: they not only facilitate the opening, but let go the deposit without preparing a loose end by blasting away the slate rock, in doing which great damage is often caused to the remaining block of slate; the sudden expansion of the gases invariably expending much of their strength upon a large portion of the slate rock, thereby rendering its conversion more difficult, and greatly increasing the percentage of rubbish that has to be removed to the waste heap, at a great cost. This quarry possesses another great advantage over the perpendicular cleavage: the rock being pure, and the side joints sufficient in number, the block, when loosened from the natural joint, or cut off by blasting, can be rapidly split into the most convenient thickness for transit to the slate bank. A large portion of the rock taken from the upper part of a perpendicular slate vein is invariably tumbled to the floor, a distance of 25 or 30 feet, often shattering or otherwise damaging the rock; yet where the vein is cut up into small pieces by the too frequent occurrence of *slides*, &c., and where the mass is greatly disturbed, the perpendicular cleavage has the advantage, providing the *foot-joints* are regular and horizontal. These natural advantages in the Chapman Quarry tend to make it more profitable, and consequently enhance its value.

The cleavage of the Pennsylvania Quarry, on the Lehigh and Delaware, or mountain range, lies at an angle of about 50° ; in every respect this position is not so convenient to the operative. Although in this quarry the loose ribbon side supplies an even floor; yet, for drilling, or what is more commonly called boring, the inclination of the face is not so advantageous, neither can the quarryman exercise the same choice in dividing the slate block, which is a very important part of the work—one mistake here often leads to many. The great secret of producing a fair proportion of slate from a block of a given thickness lies in arranging proper divisions. The beds in this quarry, mentioned in my third letter, are of free cleavage, close grain, with very smooth surface; some of them are of a shade lighter colour than others, yet the metal is fine and excellent. There are some disadvantages to be encountered in working a slate vein dipping at an angle of from 40° to 50° ; there are also certain advantages, especially where the ribbon, or foot-joint, provides a natural floor. Independent galleries can be wrought upon, and each kept such distance from the other as to allow their working without the least danger or inconvenience; this being the case, it will be seen that any number of galleries can be carried onwards at the same time, and their number increased by admitting a fresh addition at both the top and the bottom of the quarry. Generally, slate rock with this inclination has either to be cleared or (using the quarry term) "the bone cut," or chambering encountered under the trap rock or overburden. The Pennsylvania Quarry is remarkable in this particular; the position of the vein admits of its being worked as an open quarry, the ribbon crosses the grain at an angle of 30° , and there being no trap rock or overburden, the working is at once commenced within a few feet of the surface, a great saving in tunneling and roofing-up, and the broad daylight (an advantage also to the quarryman), all meet in the shape of profits where and whenever Nature is pleased to disclose and supply such available facilities for converting her treasure.—Nantlle, Carnarvon, Oct. 2. J. KELLOW.

STEEL MAKING—THE BESSEMER QUESTION.

SIR.—I have perused in your columns a letter, signed Henry Bessemer, containing libellous statements, tending to damage my character, and apparently written with that express intention. I must, therefore, request you, in justice to myself, to insert *verbatim* the following remarks in your next impression. On reading the offensive article in question, I wrote to Mr. Bessemer as follows:

Cheltenham, Sept. 26.—I have perused your letter of last week in the *Mining Journal*. As rivals we have both much to forgive, but after I had cordially expressed my regret for what I had said *ante*, and that apart from any anticipated personal interest of my own, it had all been unhandsome and ungenerous on your part to write a letter raking up old grievances, and reflecting seriously upon my character. Much of your letter springs from an excited imagination, possessed with the idea of plots and attempts to ruin you which never had any existence. You charge me plainly with dishonesty, in respect of my speculative patents. The declarations to those patents were attested in the belief that two of them were very valuable, and the third more valuable still, provided, as I was assured, metallic manganese could be procured commercially. I, therefore, made the requisite attestations in good faith, on Mr. Brown's recommendation, who waited on me with Mr. Hindmarsh for the purpose; but I immediately found, from tests on the small scale, that two of the processes did not succeed, and no metallic manganese could be found to make use of in the third. Any patentee is at liberty, on finding that his claim is worthless, to recommend that his patent shall not be taken out, or to declare it to be valueless, without subjecting himself to a charge of perjury. I could easily refer to several of your patents which, no doubt, you from the first found to be valueless. It is strong language to tax a person boldly with perjury for taking out speculative patents, and I think you must admit that you have gone too far, and in condemning me for my speculative patents have very forcibly condemned yourself. At all events, I have now to ask you to withdraw the libellous statements affecting my character which you have made, and which are calculated, emanating as they do from a man in your position, to do me serious injury. I very much regret that you did not, in a calm and dignified manner, declare your intention of not recognising my moral claim for remuneration, in place of indulging in statements of such a personal and vindictive nature. I beg leave to say that my former partner, Mr. Clare, informs me there is no foundation for the statement you have made respecting him. I can with safe conscience affirm that I never plotted against you; on the contrary, my prospects were blighted in consequence of the Ebb Vale Company declining to coalesce their interests with yours. I have never provoked, real or which I believed to be real, written severely and bitterly against you, and I have since expressed my regret to you for what was unjust. After having done so, and after inviting you to a friendly discussion, I was not prepared to expect a reply replete with personal and most unprovoked abuse. This I deeply regret, and have no doubt, when you take a calm view of

the subject, without lashing your temper up by recalling past grievances, real and imaginary, you will likewise regret it.—R. MUSHET.

I shall not attempt to refute *seriatim* the misrepresentations contained in Mr. Bessemer's letter, though the task would be an easy one. I will content myself with exposing the great inaccuracy of a few of his statements, and which will serve as an index to the value of his other assertions. Mr. Bessemer visited me at Coleford in January, 1857, and then, to use his own words, he found himself ruthlessly sacrificed by me, and sold to the enemy—Mr. Thomas Brown. Such, however, was Mr. Bessemer's forgiving nature that on the following February 14 he wrote to me a most good humoured and facetious letter, without making any allusion thereto to the "ruthless sacrifice" I had so recently made of him, when he saw me in the preceding month. When I say his letter was facetious, I may observe that he compared himself to an old lion with out teeth, and he rejoiced that I had not sold my patents to the enemy. "Well, by-and-by my patents were taken out, and Mr. Bessemer says he was filled with deepest disgust and indignation at their perusal; their construction was, says he, shamefully dishonest. He saw at once the net that had been spread for him, and realised the extent of the conspiracy to ruin him. My duplicity and moral depravity stood fully revealed. This took place in the spring of 1857. After this your readers will imagine that Mr. Bessemer, with all my plots, my duplicity, and moral depravity laid bare to his mental vision, would forthwith have broken off all intercourse with me. The "ruthlessly sacrificed" Henry Bessemer, however, did nothing of the kind, but went on corresponding with the depraved arch-sabotist, Robert Musket, as though the former good gentleman had never been "ruthlessly sacrificed" by the latter villain. He continued to correspond with me on the most friendly terms, and never alluded to the "ruthless sacrifice," the "net," the "plot," or my duplicity and moral depravity. Here is one of his letters, written long after my moral depravity and heartless conspiracy had, as Mr. Bessemer states, been fully revealed to him:—

Quorn-street-place, Oct. 9.—I am in receipt of your favour of the 7th Inst., and beg to thank you for your promptitude in sending the orders for pig-iron, &c.

Our manager will advise me of their arrival at Sheffield, which I hope will be at an early date.—In haste, yours truly, H. BESSEMER.

The fact is that Mr. Bessemer, unable to resist the moral force of my claims, or to argue the question temperately, has lost his temper, and, under strong excitement, has lavished personal abuse, for lack of argument, upon me, and placed himself in a false position. I invited him in courteous terms to discuss with me an important scientific question, and I have elicited from him only a volley of personal abuse and malicious slander, such as has rarely if ever sufficed the columns of a public journal, impugning not merely my character and that of Mr. Brown, but that also of the late respected and accomplished Mr. Hindmarsh. I am obliged to Mr. Bessemer for the public and incontrovertible testimony he gives in his otherwise unpleasant letter, to the fact that the use of a triple compound of manganese, iron, and carbon, whether of the variety called Spiegeleisen, or of the class termed ferro-manganese, is essential to the success of his process, and that therefore the whole of the enormous revenue derived by himself and partners from royalties has been reaped from the use of my patent process, and the public will recognise my moral claim, even though I did, under great provocation, write cutting and sarcastic articles some years ago, which naturally must have offended Mr. Bessemer. I am likewise grateful to the many friends who have, on my behalf, sought to induce Mr. Bessemer to do me justice and therefore himself and partners, justice; and their kindness is the more to be acknowledged, seeing that their exertions have been made unknown to me, unasked for by me, and from a sense of the undeniable justice of my cause. Had not Mr. Bessemer, in his vexation, disclosed these facts, I should never have known that such kind friends had been interesting themselves on my behalf.

One more remark, and I conclude. Mr. Bessemer says that all my patents depend upon his. Probably the world may believe, from ignorance, this singular assertion. I have a patent for making melting-pots, another for fettling puddling furnaces with limonite, another for pounding cast-iron, and many patents for the use of titanium in the manufacture of pot-melted steel. Can Mr. Bessemer show in what manner these patents all depend upon his? It seems to me that when Mr. Bessemer is in a pet, and great men are, like other mortals, subject to petts, as are even heroes to the toothache, he loses sight of this great fact—"Magna est veritas et praevalebit." Recommending this to his serious consideration, I conclude.—*Cheltenham, Sept. 29.*

R. MUSHET.

PURE WATER FOR LONDON.

SIR.—There are at present before the public two gigantic proposals for securing pure water to the metropolis. I would venture to suggest the possibility of obtaining an ample supply at a much less outlay. I assume that within a radius of 25 miles round London forty stations could be found for sinking artesian wells and erecting pumping-engines. At each station there should be two 30-horse power engines with 18-in. pumps, which would pump up 2,500,000 gallons per diem. Forty such stations would furnish one hundred million gallons of pure water per day, raising the same to an elevation to the highest points of London—say, 400 feet.

The average cost of wells, engines, and buildings would be 12,500/-; consequently the whole undertaking would be 500,000. The daily working expenses of the forty stations would be 200/-, to which must be added interest on the whole outlay, 65/- 9s. 10d. per day, making together 268/- 9s. 10d., which would be the total cost of supplying London with 100,000,000 gallons of pure water daily. The expenses, compared with the quantity of water supplied, would give 1d. as the price of 1550 gallons.—*Harrow, Oct. 3.*

ED. PREECE, Engineer.

MINING IN CORNWALL AND DEVON.

SIR.—It is gratifying to see a prospect of an improvement in the price of metals, but whilst tin and copper are so low would it not be prudent to seek profitable employment for miners and capital by opening the promising silver-lead mines of Cornwall and Devon? Considering the price silver-lead ore will now fetch—a parcel has recently been sold from South Chiverton at 22/- 10s. 6d. per ton—I think it would not be over-rating the present value of the silver-lead ore raised in the Chiverton district if we take the average at 15/- per ton, and there are, no doubt, many localities which offer as great chances of success for the profitable working of silver-lead mines, amongst which may be mentioned the district north-west of Helston, the whole of which, from the seat of Mr. J. J. Rogers, following the Loo Pool to the Loo Bar, and from thence to Porthleven, may be said to be a silver-lead producing district, and certainly offers great chances of success, and in addition to the Old Wheal Rose, Wheal Penrose, and Unity Mines—all very imperfectly explored—there are two lodes running about 16° north of east, which are extremely promising, and producing silver-lead ore at the adit level, one of which contains at the rate of 60 ozs. of silver to the ton of lead. The ores found in these mines are of great variety, such as the phosphate, arsenate, carbonate, sulphate, and sulphide of lead; and it appears that during the working of Penrose the sulphide of lead was the only lead ore recognised by the miners. It has been said, on good authority, that a large number of tributaries could be employed in these mines as soon as the water is out. Although there may be a slight depression in the price of lead, there is no fear of glutting the market with silver, or reducing silver-lead ore to such a price as to make it unprofitable to work a mine of ordinary richness. The average price of the ore sold from Penrose for the last five or six years is about 15/- per ton. The tributaries now working above the adit level are doing well, and leaving a profit to the employer.

A MINERS' FRIEND.

PROSPECTS OF THE CARADON DISTRICT.

SIR.—That no time in the annals of mining has presented a more favourable opportunity for the investor than the present, is evident from the fact of a reaction having taken place in the price of metals, together with a probability of money being more abundant than it has been for a very long period, a greater portion of it than has ever yet been will be applied to the development of England's mineral resources, inasmuch as mining proved all through the late panic to be infinitely safer than that of Banks or Financial Companies, and in future it will deserve to take precedence over speculations of any other kind; but, notwithstanding this, it is necessary in making such selection to use every precaution, and to invest in none but what can bear the strictest investigation. But while mining is a great science—and, I am sorry to say, but little studied—there are, nevertheless, some mines in my category which present such features of success, that any common-sense man who never saw a mine can, by asking himself a few plain questions, see at a glance that they are to a great extent divested of the usual speculative character accompanying this kind of property. As, for instance, in the case of WEST CARADON, which some time since was losing about 100/- per month, while the shares were selling at 35/- to 40/- per share, the present improved state of the mine admits of a loss of only about 80/- per month, while the shares are now at about 12/- per share. In a mine of the magnitude of West Caradon, where there are no less than fourteen lodes, all of which have been very rich in the upper levels, with a full complement of tutwork operations, the smallest discovery would place it in the Dividend List, and, looking at the promising appearance of some of the points in operation, I should not be surprised any day to hear of such; indeed, this mine is now passing through the same transition state which has marked the history of all the richest mines ever discovered; and where there is one uniform system in the nature and composition of the ground, without such hard backs and floors of crystalline rock, I have seldom or ever seen the lodes productive to any great extent. In the eastern part of this mine a rib of such ground is known to exist in the upper levels, and its extent has long been known to hold so far as what is called the little cross-course, to the west of which, in softer ground, all the lodes have been productive, and, indeed, all the profits (100,000/-), have been derived from this ground. The 116 and 128 fathom levels are now being driven up to this same cross-course, being within a small distance of it, and will shortly enter the productive ground; signs are already apparent of the desired change, and it is known that a few months only is required to prove all this, it is no more than fair to anyone who has seen the mine, and knows its prospect and capabilities, to say that the present price of shares is not a tithe part of the value of such a property, and that a great and quick rise must take place is inevitable.

It may not be out of place here to draw comparisons with the great districts of Gwennap and Camborne, showing that the composition of the rock in which the great deposits of copper have made is identical. Whether the rocks be granite, slate, or elvan, their hardest portions are always quartzose, and in these the lodes are seldom rich; this is because the lodes when traversing this quartzose partake of its nature, and thus afford no place for the reception of other substances of greater value; or, in other words, these ribs of rock are what may be termed electric abutments, and they occur, as I explained in the former portion of my letter, in all the rich mines I have ever known, between which in the softer portions of the rock the great deposits are found; here, as is the case in the Gwennap and Camborne districts (and, indeed, all others of any note), this proof is fully demonstrated, and when further broken up by cross veins and other dislocations, the practical, discerning, and scientific miner can arrive at conclusions resulting almost to a certainty. In surveying

property of this kind, one must judge not only from appearances but by analogous comparisons, which if the science were more studied by those whose province it is to inspect such properties, the public would, through them, be more enlightened as to what they may expect on further development, instead of, as at present, the meagre reports which emanate from the majority of them.

St. Day, Scorrer, Cornwall, Oct. 3. — CHARLES BAWDEN.

THE LATE MR. JAMES LANE.

SIR.—I cannot deny myself the sad gratification of offering a few words tributary to the memory of the late Mr. James Lane, whose remains are still unburied. All persons acquainted with the Mining Market, and with City operations connected with mining, respected Mr. Lane, as a man of integrity, business capacity, fairness, and good faith. All, either in business or in the social circle, who knew him felt pleasure in his acquaintance. His vivacity, genial nature, generous disposition, tender sympathy, and charitable spirit not only distinguished him, but lit up kindred susceptible ties in the hearts of others. For twenty years Mr. Lane has been known to investors and agents in the mining business; and such was his influence in the trade that it will scarcely be possible to fill up the space he leaves. It would not be saying too much if it were affirmed that Mr. Lane did a great deal to give formation and system to the mining business in London. It has been happily, yet sorrowfully said—"Our blessings brighten as the take their flight." Many will feel this in the departure of the worthy man who is so generally regretted; for myself, I can sincerely say I always appreciated him, and can look back through my whole connection with him with tender esteem and respect. Having known him for very many years, and being engaged so much in the same walk of life, I cannot refrain from giving this expression to my feeling.—*Gresham House, London, Oct. 5.*

THOS. SPARGO.

CRENVER AND WHEAL ABRAHAM UNITED MINES.

SIR.—In last week's Journal I observe a letter from a person signing himself "C. W.," which, for the sake of those interested in the matter, I cannot forbear to notice. I do not take credit for the cutting the ores at St. George's shaft, Captain William Rogers, of Sithney Wheal Metal, told me, about two months since, that he knew where there was a course of copper ore, left by the old workers, and fixed a day when he would come to the mine and show us where it was: he failed to keep his appointment. About a month afterwards I saw him again, and arranged that he should come on Monday, September 19, which he did, and we were all glad to see him, and no one expressed a doubt as to the truth of his statement for a moment. He had not to challenge anyone to go underground with him, a suit of clothes being prepared for him before he came to the mine. Capt. Rogers went, with Capt. J. Cren (not Capt. J. Chegwin), down St. George's shaft, to the 60 fm. level, and pointed out to him that the ore was standing 10 or 15 feet above the back of the 70, and that it could be wrought at 5s. in 16 tribute. There were no means of seeing it that day, but the following day our agents, with some men to assist them, went down by a rope, and found the place as described by him, but not to be wrought at 5s. tribute, for men to get fair wages out of it. "C. W." takes upon himself to say that "this lode is standing whole to surface;" this, I beg to say, is not the case. The 60 is laid open to a great extent westward and eastward several fathoms, and the backs taken away. We are now clearing this level, to see what ground has been wrought in the bottom of it. We have an opinion that this lode has slipped away on the south side, several fathoms east of the shaft. The 70 is driven 16 fathoms west of shaft, but there is no driving east. The tributaries have stopped the ground to the bottom of this level, which is extended about 4 fathoms east. The lode is from 4 to 5 feet wide, and worth about 20/- per fathom. If there were a level driven, and the ground fairly laid open, it could be wrought for 6s. 8d. in 16 tribute. If "C. W." had troubled himself to ask me where the shaft had taken the lode, I would have set him right. It took the lode about 6 feet under the 60, and being a south underlie, it is about 2 feet south of the shaft in the 70, where the lode is taken down to make a barrow-road. The north lode is standing from 3 to 4 fathoms north of the shaft. In this level "C. W." also states that "the water has been drained below the point referred to for the last seven or eight months." He must certainly have a bad memory. We began to clear the chokes in both engine-shafts, and fork the water below the 50, in April last. I see the importance of clearing the levels and shafts as the water is being drained. I deny altogether hearing Captain Rogers, when he spoke to me, say the course of ore was at St. George's shaft, but that he came and showed it to us himself. He said he was only 12 years old when he was working with the two men who had the pitch in the former working; however, I give him credit for the faithful description of the pitch, only it is like men's version of courses of copper ore and tin left in knocked mines, generally magnified. How "C. W." could say that the agents of these mines, with Captain Gill and several other inspectors, had made any search in there to find this reported course of ore, I cannot imagine, when neither of them had ever heard a sound about it; and how the writer could have attempted to circulate such base falsehoods in the face of open day, I am at a loss to understand. Mine agents are only too glad to send the ore to market, and make the hundreds of pounds referred to in his letter. Who will then believe the writer of such an assertion? I am very well known in the county, and I do not think there are many who would believe for a moment that I should give too much tribute for a pitch; and I may say that I know a great deal better about the price of a pitch or a fathom of ground than "C. W." to whom I refer. — WILLIAM KITTO.

THE DYFNGWM MINES, AND THEIR MANAGEMENT.

SIR.—It is generally understood (amongst gentlemen) when in a controversy the opposing parties assume their respective *noms de guerre*, that the incognito so assumed is not only to be accepted, but respected, by all concerned, although everyone may be perfectly aware of the patronymics of the several controversialists. Mr. Davies, in his letter, published in last week's Journal, has seen fit to break this established rule (or set it at defiance), and I, therefore, address these lines to you, in order that I may at once emphatically state it has never been my wish or intention to hide my name from the shareholders of Dyfngwm, but rather, in signing myself "Ex Officio," in reference to my voluntary withdrawal from the managing committee, to indicate my personalty, without forcing myself on public notice.

It was with the shareholders of Dyfngwm, and the interests of that grossly mismanaged concern, that I had to do, and not with the general public, and therefore it was that I did not court publicity. Since, however, it has been thrust upon me, I will accept it with a good grace. Now, allow me to reiterate certain facts already stated by me, and to repeat certain questions which have as yet remained unanswered. First, for facts. It is a fact that I was selected by the shareholders to go into Wales, in order that I might see what best could be done to put the mine into working order. It is a fact that the clerk or overseer, at the time I wrote to one of the committee, in January, 1866, was living, not at Llanidloes, as I erroneously stated, but at Machynlleth, which is 10 miles from the mine. That the mining company now, in September, 1866, is living on the mine, as Mr. Davies states, may be true; but at the time I wrote, complaining of the fact, he was not so living, and has probably only been moved thither in consequence of the remarks I then made. The house built expressly for the officials connected with the mine was for some time not occupied by any of them. It was a fact that the flat-rods in the adit level had been for years working in rubble, causing friction; it is a fact that they have lately been replaced by wire-ropes, and paid for by us, the long-suffering proprietors. It is a fact that I saw the drawing-engine in a "beastly and filthy" condition on two several and distinct occasions (the former on one occasion being present), showing the entire absence of all supervision.

And now with reference to the excellent reports of Capts. Ridge and Ball. It is a fact that they stated that the 70 fm. level had run together, that the shaft was in a bad condition, that it must be properly cased, and that the whole of the workings should be properly timbered and made secure. Furthermore, it is a fact that there was no plan or section on the mine from which they could tell what the reserves were; and it is a fact that I had written to the committee months previously, requesting plans to be made. It is a fact that Capt. Paul said in his report, 1864, that the mine was capable of yielding from 65 to 70 tons of ore per month, with 24 men underground. I leave it to the secretary to tell the proprietors what really was raised; I would imagine it would average about a third of that quantity, until two months ago. And it is a fact that there was great disorganisation on the mine, even in those days, for Capt. Paul winds up by saying that "Capt. Painter has worked hard, and done his best for the interests of the company; and I hope Mr. Davies and he will go on comfortably together, for the benefit of all interested." There ought to be a good house on the mine for the resident agent to live in, in such an exposed part of the country; such would pay for itself in a short time, to have an agent living on the mine" (Mr. Davies, the agent, living five miles off!) Oct. 3.

A MINERS' FRIEND.

It is not a fact that they stated that the 70 fm. level had run together, that the shaft was in a bad condition, that it must be properly cased, and that the whole of the workings should be properly timbered and made secure. Furthermore, it is a fact that there was no plan or section on the mine from which they could tell what the reserves were; and it is a fact that I had written to the committee months previously, requesting plans to be made. It is a fact that Capt. Paul said in his report, 1864, that the mine was capable of yielding from 65 to 70 tons of ore per month, with 24 men underground. I leave it to the secretary to tell the proprietors what really was raised; I would imagine it would average about a third of that quantity, until two months ago. And it is a fact that there was great disorganisation on the mine, even in those days, for Capt. Paul winds up by saying that "Capt. Painter has worked hard, and done his best for the interests of the company; and I hope Mr. Davies and he will go on comfortably together, for the benefit of all interested." There ought to be a good house on the mine for the resident agent to live in, in such an exposed part of the country; such would pay for itself in a short time, to have an agent living on the mine" (Mr. Davies, the agent, living five miles off!) Oct. 3.

Now for my questions. Who "commanded" Mr. Davies to build up and pull down the engine-house in the way he describes? He has not answered this. How is it that Dyfngwm, of which Mr. Davies says "if worked according to his suggestions, will be one of the best lead mines in the Principality," should not only pay no dividends, but make repeated calls on the shareholders? A candid observer would put down such unsatisfactory results to mismanagement. To use a homely but expressive proverb, Sir, "The proof of the pudding is in the eating." Mr. Davies's "pudding" (the Dyfngwm pudding) has not been a morsel to relish much during the last 20 years. I myself have rather a surfeit of it. Now, Sir, allow me, in conclusion, to make a few observations. My interest in the matter is simply that of a shareholder amongst shareholders. I have no object in view but the better management of this most deplorably mismanaged concern. With Mr. Davies it is otherwise. He is unwilling to lose a lucrative situation, with the advantages according to him from the same. He is still more unwilling to confess himself in the wrong, and he, therefore, indulges

in the coarse, vituperative language which not even his mortification at finding himself exposed, nor his natural Celtic irascibility, can excuse. It is impossible for me as a gentleman to answer his letter in the way it deserves. Strip it of its rancour and vindictiveness, and nothing remains but bombast, braggadocio, self-glorification, Sabbatarianism, and Welsh quotations. It behoves the shareholders to open their eyes, for surely if Mr. Davies's conscience were easy his abuse would be less coarse. I pass over the puerile twaddle about Sabbath breaking with which Mr. Davies's letter is adorned. It may be very well adapted to the proclivities of that sect of Welsh dissenters of which he is a shining light, but scarcely embellishes or adds lustre to the columns of the *Mining Journal*.

Mr. Davies, in his anxiety to save somewhat of his *prestige* amongst the little world with which he is connected, unscrupulously seizes on any plausible pretext to quibble and evade the question. I also pass over the folly of his preposterous Welsh quotations; as well might I quote Greek or Hebrew in a commercial journal. It may please the simple, honest Welsh miners to see a line of their own unpronounceable vernacular in print, but the readers of the *Mining Journal* will scarcely feel themselves specially benefited by it. Allow me in conclusion to remark, Sir, that the apathy of the shareholders in this matter is very surprising. I can only suppose, like Uriah Heep, that they are not only "veryumble, and like being despised," but that their elastic ambiguity stretches so far as to approve also of Mr. Davies's management, or mismanagement, and of the reckless expenditure of years. Letters from Wales now lie before me, telling me that whilst we, the long-suffering shareholders, have mildly consented to be shorn, "all the world" (round about Dyfngwm) has "wondered!"

JOHN YOUNG, alias EX OFFICIO.

THE OPORTO MINING COMPANY (LIMITED).

SIR.—This company was formed some few years back, for the purpose of purchasing and working the Serradella and other mines. Many gentlemen of position in this town were induced to become shareholders partly upon the report of the Portuguese Government engineer, supported by Mr. John Calvert, C.E., of London, whose experience in working and inspecting such property gave confidence and assurance to those investing in the concern. Both these gentlemen pronounced Serradella to be a *mine*; and both estimated the sum of 2000/- as necessary to open the works, but up to the present day no attempt has been made to erect any

that property; indeed, the general opinion was that it was the best mine in the district, not even excepting the old mine; and, therefore, the best possible thing that could be done was to devote 7000t. out of the 18,000t. to the development of that mine. He believed that would be the means of making the Linares Company what it used to be in bygone days.

Mr. HENDERSON said that the assets amounted to 35,000t., and the liabilities to 17,000t. The directors have closely considered the matter, and have come to the conclusion that 7000t. of the working capital could be safely expended in the development of Quintientos. He reminded the shareholders that three times the amount of the original capital had been paid in dividends.

Mr. JOHN TAYLOR reminded the meeting that the company had no debts, while, exclusive of the value of the mines, machinery, &c., there was available assets amounting to 18,000t. As regards the past six months' operations, they had resulted in a small profit, notwithstanding the great difficulties against which they had had to contend, and his impression was that they would do better in future. The carriage had been reduced, and he was certainly inclined to think that nothing would be lost by the old mine, but that, on the contrary, it would continue to yield good profits. With regard to the Quintientos Mine, he might mention that it contained the same vein as Alamillos, one of the richest in the Linares district. His firm conviction was that by the judicious expenditure of 7000t., the shareholders would be amply rewarded. Referring to the old mine, he stated that there was a very large quantity of ore which would be realised by the 95 fathom level; and in the adjoining mine—La Cruz—the vein was still very rich at the 130 to the 140 fm. level. The shaft—the deepest shaft east—had been for some time in course of sinking, where an engine, which was paid for, was placed, and in that direction there were some thousand pounds worth of ore, if not thousands upon thousands of tons, but whether they could be profitably realised remained to be seen. He fully expected good returns would be kept up from the western portion of the sett.

Mr. PALGRAVE, as one of the auditors, seconded the adoption of the report. He had carefully gone into the question affecting the new mines, and he had no hesitation in saying that, from the great facilities there were of getting the ore to this country, 6000t. or 7000t. might fairly be spared out of the assets of the company for the development of the new mine. The assets were equal to about 17 per share, and the value of the property, machinery, &c., taken at only 6s. in it, would be equal to another 17 per share. It was from having gone carefully into these questions that he had great pleasure in seconding the proposition for the adoption of the report.

Mr. JOLLIFFE drew attention to the fact that while the yield of the mine was diminishing the costs were increasing.—Mr. JOHN TAYLOR said the cause was fully explained in the directors' report, when it was stated that the expenditure had been heavy, owing to the greater depth from which the ore was brought to surface, and also because the produce of the lead was not so high, and the cost of the labour was increased.

Mr. SWAFFIELD said that was evident, from the fact that during the last six months the ore on land had been reduced.

Mr. TAYLOR did not say that the mine had not got poorer, for had there been no falling off their profits would not have been 4000t. only but 4000t. But he could assure them that every attention had been paid to economy. With regard to the payment of the men, they were getting 30 per cent. more for their labour, yet such was the state of the above market that they could not reduce them.

A SHAREHOLDER considered the explanations of the report given by Mr. Taylor were perfectly satisfactory. The conclusions he drew was that they were not to expect to be entirely successful, but that they must take their chance, which was a good one, of being so. And, for his own part, he must say that whether the result be successful or unsuccessful he would always be satisfied. Under these circumstances, he would rely on the recommendation of the directors. In fact, he would propose that it be left to them to carry on the mines as they think fit.

The reports were then carried, and thanks were voted to the Chairman and directors, on the proposition of Mr. PALGRAVE.

The CHAIRMAN hoped that they would on the next occasion have a more favourable report to present; although he considered the present was by no means unfavourable.—The proceedings then terminated.

FORTUNA COMPANY.

The half-yearly meeting of shareholders was held at the offices of the company, Queen-street-place, on Thursday,

Mr. CHARLES MORRIS in the chair.

Mr. J. B. COLOGAN (the secretary) read the notice convening the meeting, and the extract from the minute book, stating that the directors, at their meeting on Sept. 20, declared a dividend of 2s. per share, payable on Oct. 20. The subjoined report of the directors was then submitted:—

Oct. 4.—The time for the usual half-yearly general meeting of the shareholders having again come, the directors have forwarded to each one of you the agent's reports, the balance-sheet, and accounts for the six months ending on June 30 last. The profit made during that time amounts to 4311L 4s. 7d., which, considering the very great financial difficulties that had to be encountered, as well as the high price of labour, and the low price of lead, is exceedingly satisfactory. The financial difficulties were not confined to this country, but were met with also in Spain, where at times it was almost impossible to negotiate any bills upon London, and then only at unusually high rates of exchange. This is now here happily changed, and in Spain your agents' bills on London are in good demand. The line of railway from a station in the neighbourhood of the mines to several of the exports both eastward and westward is now complete, and your lead has been carried down for shipment with great regularity, at a cost of 1L 9s. 4d. per ton, as you will have seen by the superintendent's report. A plan for the tramway, mentioned in the directors' previous report, with an estimate of its cost, was submitted to the board of the three companies. But the total estimated cost of construction was so far beyond what the directors had expected, that they have been compelled to give up the idea of carrying it out. The directors have entered into a contract with the carriers of the district of Linares for the conveyance of lead and coal between the mines and the nearest station on terms which are considered satisfactory.

The raisings of ore during the last six months have not been so great as they were during the previous half-year; this is entirely owing to the very heavy rains that fell during the spring, and to an accident at one of the principal shafts consequent upon the floods, which caused much delay in the working. Two months were spent in securing Taylor's shaft and pumping out the water at Canada Incosa, which greatly checked the raisings from that section of the mine. These difficulties have now been partially overcome, and the working of the mine is being carried on with regularity. The large pumping-engine, mentioned in former reports, was sent out in May last; it is now at the mine, and, in course of erection upon a shaft which is in the heart of the best portion of the Canada Incosa Mine. This engine would, in all probability, have been at work by this time, but for the delay caused by the quarantine imposed in Spain on all vessels arriving from England.

The fund for the redemption of the debenture bonds already amounts to 4282L 14s. 4d., and it is being regularly increased. The cost of the new 50-inch engine, with its boilers, pumps, and pit-work, and some other machinery, amounts, as is shown in the accounts, to 4386L 16s. 3d. The directors have thought it would be to the advantage of the company to carry on a portion of that amount to plant account; they have, therefore, written off a sum of 1500t., and charged it against the revenue of the last half-year as depreciation, and carried it to the debit of the profit and loss account. This arrangement was submitted to your auditors, and met with their approval. From the balance thus left standing to the credit of profit and loss, the directors have declared a dividend of 2s. per share, free of income tax, and payable on Oct. 20. The directors think they may safely congratulate the shareholders on the good position of the concern. A very large amount of work is being prosecuted for the development of the mine. A sum is steadily accumulating for the redemption of the debenture bonds, and a good profit, under considerable disadvantages, has been realised.

The CHAIRMAN, in moving the reception and adoption of the report, remarked that although it might not be quite as wished he did not consider it could be regarded as unsatisfactory; indeed, for his own part he must say that he was agreeably surprised to find that their position was so good, for they had had to contend with a temporary stoppage at the mine, the low price of lead, and the financial difficulties. The mine, however, was now in good order, and the advices from America were good, so that within a comparatively short time they might look forward to a rise in price. There was likewise a further cause of advantage—look for, in the reduction of carriage.

A SHAREHOLDER enquired when they were to begin to pay off the debentures?—Mr. COLOGAN said that the first drawing of lots would take place in Aug., and the payment of the lots drawn would be made in the February following.

Mr. TAYLOR, in reply to enquiries from shareholders, stated that the payment of these was certainly a heavy tax upon them, but the debentures were issued to enable them to extend their works. The shaft in the centre of the mine (Taylor's shaft) was the shaft used by the old Spaniards, and although it was considered desirable to use it, it was not situated in the best part of the mine, consequently it had never been deepened, and arrangements were made to work other shafts. At the time the debentures were raised they found that they could not go on without increased power, and by the arrangements now made their power would be more than doubled. The engine-house is being built at O'Shea's shaft, and the engine there would, he hoped, be at work next summer. They have the necessary machinery on the premises, but it requires to be more favourably placed, and this would be done as speedily as possible. Upon the debentures being paid off they would have for a time to forego a percentage upon their dividends, to create a floating capital, but as they would ere that be in a position to materially lessen their stocks a much smaller floating capital will be necessary.—The report and accounts were then unanimously adopted, the proceedings terminating with the usual complimentary vote of thanks.

GREAT MONA MINING COMPANY.

The second general meeting of shareholders (adjourned from Aug. 8) was held at the British Hotel, Douglas, Isle of Man, on Sept. 21, Mr. EDW. THOMAS in the chair.

Mr. J. TAYLOR (the secretary) read the notice convening the meeting, after which Mr. J. MEGUIN read the directors' report, which, together with the statement of accounts, was received and adopted. Mr. Meguin also read the report of Capt. John Kitto, as follows:—

During the past half-year the most active and energetic operations have been employed in endeavouring to determine upon the most important and proper point to erect the first machinery, with a view to establish at the earliest moment the fact of the existence of some important lodes, embracing the elements of future success. Several extensive trials have been made in different parts of the sets, which have resulted in the discovery and partial development of some very powerful and interesting lodes, highly mineralised in their character, and which, if fully operated on, will undoubtedly result in becoming highly productive and profitable. The last, but not the least promising, of these trials has been made by unwatering (by manual labour) that part of the company's property known as Ballaglass. The water has been drawn out as deep as the roof of the 22 fm. level. In the 10 fm. level there is a strong lode, which has been driven on for a considerable distance, and in many places is productive of both

lead and blende, that will nearly pay for stoping. This lode has a striking similarity to that of the Great Laxey, both in character, bearing, and underlie. To the south of the shaft there is a stop in the sole of the level, in which the lode is from 1½ to 2 feet wide, and will yield from 2 to 3 tons of lead per fathom. From what can be seen of this lode at and below the 10, I consider it to be of a very promising character, and have no hesitation in recommending this to be the site for the erection of the first machinery, as I fully believe that this lode, if vigorously operated upon, will prove satisfactorily productive. We have also made some extensive trials on the north and south lode, near the Cornea Bridge, both by sinking and driving, but we consider the indications are not sufficiently good to warrant the erection of machinery on the lode for the present, as was at first intended. We have sunk a shaft on the lode as deep as we can without the aid of pumping machinery, but have failed to obtain any very satisfactory result. In order to give it a further trial, I would recommend an adit level being driven to its intersection on the new lode, discovered some time since in cutting the tall-race, which in itself is of a very promising character, and well deserves attention. By this course of procedure the merits of both lodes can be tested, without any very considerable expense, and the future plans of operations decided upon. A considerable distance has been driven on the east and west lode at Ballaglass, as well as on the caunter lode at the same place. Both lodes, although small, generally look promising, and occasionally produce some nice pieces of lead and copper. In conclusion, I would suggest that the main force should be concentrated, and brought to bear for the present on the Ballaglass sett, and that the new wheel, with pumping and winding machinery attached, should be set in operation without a moment's delay.—J. KITTO.

Capt. J. TREWIN (the resident manager) stated that he had every confidence in the mine becoming a great success, and that he fully expected to have a cargo of blende ready for market in three months after the machinery was erected, which it was expected would be in about three weeks. Altogether, he considered the prospects of the mine were encouraging.

It was decided that the next general meeting should be held in Manchester, on Tuesday, February 26, 1867.

A vote of thanks to the Chairman, for the able manner in which he had conducted the business of the meeting, having been proposed by Mr. J. COOLE, and seconded by Dr. CREGGAN, and unanimously carried, the proceedings were brought to a close.

EAST ST. JUST UNITED MINING COMPANY.

A special general meeting of shareholders was held at the offices, New Broad-street, on Monday,

Mr. HENRY L. PHILLIPS (managing director) in the chair.

The notice convening the meeting was read, and the joint report of Mr. Angwin, Capt. R. Pryor, R. Weame, and W. White (the late manager, and agents), which appeared in last week's Journal, was taken as read.

The CHAIRMAN said that the circular he had had the pleasure of forwarding to the shareholders so fully pointed out the object of the present meeting that it would be unnecessary for him to enlarge thereon. The report of the late purser and manager of the St. Just Mine clearly showed how important it was for the shareholders in East St. Just to effect an amalgamation of the two properties, as thereby inestimable advantages would be derived both as regards time and outlay. It was not too much to say that something like three years of development would be saved, and, of course, the amount also that would be expended during that period. Although he had succeeded, under special circumstances, in purchasing St. Just Mine upon most favourable terms—such as, he hesitated not to say, as no other person could have secured—he, with his friends, being largely interested in the permanent and speedy success of East St. Just, had offered to re-sell to that company the advantageous purchase he had effected upon the same terms as he had acquired it, although by so doing he was making a very considerable sacrifice, inasmuch as he could at once dispose of it to other parties at a profit of no inconsiderable amount. (Hear, hear.) The shareholders were, doubtless, aware that the returns from St. Just United were 15 tons of black tin per month, and that, therefore, it was at least self-supporting; and, by the facilities which the amalgamation would afford, not only would the returns from each property be largely increased, but the cost of production would be materially lessened, while development could progress much more speedily and economically. (Hear, hear.) Among those whom he had the honour of addressing there were many familiar with the conduct of mines, and to whom the fact was patent that judicious amalgamations of mines were invariably productive of satisfactory results, and for the obvious reason that what was known as the dead or unproductive charges—and which were necessarily heavy and permanent—were nearly as large in a small as in a large mine, and besides that the greater the area of operations the less was the average cost of production. He was not unmindful of the fact that just now the market value of tin was not such as could be desired, but he thought that would prove to be but of a temporary character, for he saw the letters from Amsterdam stated that after the great reduction in price a very considerable reaction would take place; and, in support of that opinion, he found that his esteemed friend (Mr. George Noakes), the Chairman of the Great Wheal Vor—the most productive tin mine in Cornwall—had stated at a recent meeting that it was evident the imports were decreasing, and as the great depression which had pervaded Cornwall had caused the stoppage of a large number of tin mines, so the produce from Cornwall would also be lessened; and besides that, what he believed was the fact, there was an increased demand, for the tin-plate workers were full of orders. Taking all these facts into consideration, and looking at the great expansion of commerce upon a more healthy footing, he thought there were substantial grounds for believing that better prices were likely to result. That (continued the Chairman) was the opinion entertained by Mr. Noakes—than whom few, perhaps, were better informed upon the point; and, therefore, when he (the Chairman) stated that he thought the present low prices would be but temporary, it was not without sufficient authority. (Hear, hear.) As an assurance of the appreciative manner in which his offer of the re-sale of the St. Just Mine had been received by the East St. Just shareholders, he might incidentally mention that already 2000 of the 3000 proposed new shares had been accepted before the result of this meeting was even known. (Hear, hear.) Having mentioned that there were present Mr. Angwin and Capt. R. Pryor, the late purser and manager, and also Mr. Boys, who represented a large local interest, from all of whom any information required beyond that communicated would be gladly afforded, he concluded by proposing:—“That, for the purpose of acquiring the property known as the St. Just United Mines, lately purchased by Mr. H. L. Phillips, the capital of the company shall be, and is hereby, increased by the issue of 3000 new shares, of the value of 5s. each, the sum of 15s. per share to be paid upon application, and 17s. per share upon allotment, such shares to be first offered to the existing shareholders, and any not taken by them to be disposed of by the directors in such manner and upon such terms as they may think fit.”—Mr. ELLIS had much pleasure in seconding the motion, and he believed it was the fact, there was an increased demand, for the tin-plate workers were full of orders. 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charged for in the cost-sheets of the months in which any portion was supplied. The cost of the Brigan materials had also been charged; therefore, there would be only the cost of some extra pitwork, and a few other items, to come in as extras in the next balance-sheet.

Capt. Rich said that by the end of November the whole of the new machinery would be fixed, and the extra work completed and charged, so that from the next account, with the results from the rich deposit of ore in the shaft, there was reason to hope the mine would pay the costs for its development to a large and profitable property.

Mr. RAWLINGS (Messrs. Harvey and Co., Hayle) said there could not be two opinions that, under the skilful management of Capt. Rich, the whole of the operations had been carried out in a thoroughly miner-like manner, which reflected the greatest credit upon Capt. Rich. The mine throughout was being worked in a most satisfactory manner; and he only hoped, as he believed, his exertions would be crowned with success.

Capt. Rich, in reply to questions from Mr. Little, stated that he expected to be able to sink Sieggen's shaft about 3 fms. per month.

The CHAIRMAN mentioned that in the boundary shaft, which was 16 fathoms below the bottom of Sieggen's, an exceedingly good lode was left, the advantage of which would be derived when operations were resumed at that point. —Capt. Rich said that in the winze, 30 fathoms west, they were coming into the same character of ore. In Butler's shaft there were some good stones of ore, and a strong, kindly lode. It was impossible to say to what depth they would have to sink before the ore ground was reached, but there was no doubt whatever about the character of the ground—a miner could not express any other opinion than that it was a most kindly lode. Looking at the mine as a whole, he (Captain Rich) might state that there could not exist the shadow of a doubt that Great North Downs would in the course of time prove a great and profitable mine, if there was anything like certainty of results from lodes seen and developed, than Great North Downs was a certainty. (Hear, hear). Their great object was to continue sinking the shaft and open the levels westward. There were 60 fms. east—that is, between Sieggen's shaft and Wheal Rose boundary. The lode would drain the lode from end to end, thus Butler's shaft would be sunk dry, and that was 130 fms. west of Sieggen's, and nearly 200 fathoms from Wheal Rose boundary.

The motion for receiving the report and entering it upon the minutes, and passing and allowing the accounts, was put and carried unanimously.

A call of 10s. per share was made, and the committee of management were re-elected.

Mr. KING, as a large shareholder, said it had afforded him considerable satisfaction to find their mine in such an encouraging position, and the more especially as it confirmed the opinion he had always entertained with regard to Great North Downs.

Capt. Rich stated that if all the mines in the district were to stop it would not affect Great North Downs, and especially when the other engine was at work. A vote of thanks to the Chairman terminated the proceedings.

THE WICKLOW COPPER MINING COMPANY.

The directors of this company have, in anticipation of the general half-yearly meeting of shareholders, to be held in Dublin this day (Saturday), issued the following report:—

On approaching the fortieth year of the existence of this company, the directors have much pleasure in being enabled to propose to the shareholders their acceptance of the largest half-yearly dividend ever paid, and in tendering to them the hearty congratulations of the board upon the efficient state of their property, so successfully developed under the able management of Mr. Edward Barnes. The directors wish to observe that for the last ten years—say, since March 1, 1856— including the payment now proposed, the proprietors will have received in dividends the sum of £69,175., of which £27,000. will be the amount divided for the year just closed. The company has undergone many changes, sometimes prosperous, at other times the reverse; and in bringing before you the present satisfactory state of the mine, it is well to remind the shareholders that much is dependent upon matters over which your directors have no control; all they can do is to continue exercising that foresight, caution, and energy which heretofore has so successfully developed your property. The matters referred to as peculiar to this mine are:—1. The produce of the mine—2. The market for the produce.—3. The carriage to the market. With respect to the produce, the yield and prospects of the mine are most satisfactory, as will be learned from Mr. Barnes's accompanying report. Independent of the large reserves of ore round now explored, and daily added to by the continuous opening up of new levels, &c., the directors congratulate the shareholders upon the fact that the new western shaft, No. 3, is (at a depth of only 18 fms.) producing 2 tons of pyrites to the fathom, thereby paying the expenses of the operations upon this important portion of the estate. Since the last meeting a new steam-engine (the seventh on the mine) has been erected to work the new shaft, No. 4, and is now satisfactorily aiding in the trial of the lode in the virgin ground, 145 fms. to the west of No. 3 shaft, above referred to. The market for the produce of the mine is, and has been for some time, in an improved condition. The Board of Trade returns show a material and important increase in the export of the manufactured articles, while our information points to an equally satisfactory result in the home consumption; and we are happy to record the continued progress and extension of manufacture in Dublin, Belfast, and Cork. However encouraging this revival of the trade may be, yet we cannot help recalling to your memory the serious fluctuations it is subject to, and which in the years 1854, 1855, and 1856, prevented the payment of any dividend in this company. The question of carriage is most embarrassing. You are aware that the Dublin, Wicklow, and Wexford Railway Company have lately given notice of making a material increase to the carriage rates for merchandise over their line, which heretofore considered excessive in comparison with the charges of other railway companies. Fortunately for us, we are protected by a contract, which does not expire till May, 1868. In the interim the directors would hope for the interference of the Legislature, or that some independent mode of carriage would be promoted, which they consider would be justifiable and remunerative to the proprietors, and which they would recommend the proprietors of this company to support. In consequence of these charges we are obliged to continue the use of carts for transport of the ores from the mine to Arklow, the cost being, as distinguished from railway carriage, in favour of the carts. Your property in the harbour of Arklow continues in its usual condition, affording great facilities for our trade. We should gladly see some extensive works of improvement there, but we apprehend such as would be required are beyond the reach of this company. In the working expenses of the mine the directors have to contend with the increased cost of coal and the scarcity of labourers. With respect to the former, we cannot see any prospect of reduction, as the district must always depend upon the coal fields of England for the supply of fuel. But by an improvement in the condition of the latter, the directors look forward to possessing a contented and respectable class; and with that view they have ten cottages, with the necessary land for gardens, &c., in course of erection on your estate, which are fast progressing to completion, after the plans and under supervision of Mr. William Levings. The net profit for the half-year amounts to £57,000. 9s. 11d.; of this sum £74, 9s. 11d. has been added to the indemnity fund against bad debts; and the directors recommend a dividend of 18s. per share, payable to the proprietors free of income tax, on October 15, which will leave a surplus of 4000, to be added to the capital account.

Mr. EDWARD BARNES, the resident director, in his report, states that the raisings have been—Pyrites, 21,700 tons; copper pyrites, 750 tons; XX ore, 700 tons; copper ore, 200 tons; precipitate copper, 6 tons; riddlings, 500 tons; smalls, 1000 tons; total, 24,500 tons. The machinery, engines, and inclines are all in efficient order, the shafts, levels, and points of working are in a satisfactory position, and the general prospects for future production of ore are of a substantial nature.

THE TIN TRADE, AND WESTERN MINES.—A meeting of Cornish miners was held at Truro, on Monday. The effects on the market of the great sale of Banca tin in Holland, on Friday, excited some apprehension in West Cornwall from the first; for it seemed pretty clear, even to the uninitiated in the mysteries of tin, that to throw so large a quantity of metal on the market must have a depressing tendency, and depression by no means lightened if the purchasers are unable to hold their stocks. This apprehension was justified on Monday evening by the announcement that there was a reduction of 3s. per ton on the standard for ore, all round, as compared with the prices officially announced on Aug. 29. The present standards are as follows:—Common, 75s.; superior common, 76s.; fine, 77s.; superior fine, 78s. This will make the price for best tin ore about 50s. per ton; for common tin from 45s. to 46s. a ton. A sign of the times is found in the sale by public auction of Spears Consols, two engines, 1500 fms. of pitwork, &c., for the sum of £3000., to Messrs. R. White and H. Ogilvie, of Trelawnd, St. Just—a mine that, in more prosperous times, a few years since, was worth any day £2,000. The only consolation is that men who live close to the mine, and know it well, have bought it. We hope they may work Spears with success.—At Boswadden and Wheal Castle account it was known that this mine spends in labour nearly 3000. a month. The costs for three months were £2367. 2s. 10d.; the tin sold and credited was worth £1437. 11s. 4d., leaving a loss of 92s. 11s. 9d. Former balances make the mine £3000. in debt, but a strong body of local shareholders are determined to prosecute the undertaking. Nine levels are being driven; 24 tons of tin will be returned next quarter; the tuner, Mr. Richard Boys, of Boswadden, has made 5t. a ton extra by withholding his tin till the market rose; and he is hopeful both of the mine and the metal market.—Cornish Telegraph.

WELDING CAST-IRON AND STEEL.—The mode of affixing the steel face to cast-iron anvils is thus described by a correspondent of the *Scientific American*.—The plate of steel is highly polished and placed in the bottom of the mold, and dusted with fused borax. The hot cast-iron is then poured into the mold, which is so "gated" as to cause it to pass over the plate and out at the other end, until the face is fused, when the escape is closed, and the mold filled. It takes about 300 lbs. of melted metal to make a 300-lb. anvil.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending Sept. 30 was 11,523. 7s. 4d.

THE RECORDS OF 10,763 CURES OF ASTHMA, CONSUMPTION, AND OTHER DISORDERS OF THE THROAT AND LUNGE BY DR. LOCOCK'S PULMONIC WAFERS HAVE BEEN PUBLISHED IN THE LAST TWELVE MONTHS.—The benefit to society which has resulted from the discovery of this medicine is, however, far greater than these figures show, as many thousands of cures are effected and not made publicly known. Dr. Locock's Wafers are sold by every medicine dealer throughout the world, in boxes, at prices ranging from 1s. 1½d. to 1s. 6d. as to meet the circumstances of all ranks. Be careful to see the name in the Government stamp.

HOLLOWAY'S OINTMENT AND PILLS.—None except the uncommonly hardy can hope to escape continual unsettled and unusually wet weather without some bodily discomfort or actual disease. Holloway's remedies have won a name and fame previously unknown in medical science for their ability of successfully contesting with colds, coughs, quinsies, rheumatism, and neuralgia. This formidable list of dangerous and painful afflictions is completely under the control of these inestimable specifics, which, used according to their accompanying directions, will soon mitigate the tortures, suppress all inflammatory tendencies, and secure the soundest health. The very moderate price charged for these never-failing remedies places them within the reach of the most humble sufferer, whose ill-health, by producing poverty, exaggerates his personal pangs.

FOREIGN MINES.

ST. JOHN DEL REY.—The produce for the second division of Aug., 10 days, was 15,492 oits., yield, 9,567 oits. per ton.

DON PEDRO NORTH DEL REY (Gold).—Capt. T. Treloar reports—By the gold troop which left on Aug. 26 I forwarded for delivery to our agents at Rio 13,517 oits., 1560 ozs. troy—two months' working. Owing to the increase in the produce the gold is remitted every two instead of three months, as heretofore. Our general operations continue to progress satisfactorily. The produce to Aug. 25 was 4508 oits., 520 ozs. troy.

ANGLO-BRAZILIAN (Gold).—Capt. T. Treloar reports—By the gold troop which left on Aug. 26 I forwarded for delivery to the agents at Rio 2655 oits. of gold dust—306 ozs. troy—two months' working. The remittances are made every two instead of three months, as heretofore. All is going on well. The produce cleaned up to Aug. 20 amounted to 1336 oits., 154 ozs. troy. To this date but little stone had been treated at the Victoria stamp, but since then it has been supplied with stone from the adit. These stamps are now working well.

LINARES.—Sept. 22: West of Engine-shaft: In the 110, west of No. 143 winze, the lode is very large and strong. The 85, west of Marlin's winze, is suspended on account of the lode being poor and disarranged. The 75, west of Warne's shaft, is of a kindly appearance, and the ground moderately easy for driving; lode worth 2 tons per fathom. In the 61, west of Crosby's shaft, the lode is split into three small branches, each containing a little lead. There is a large ugly lode in the 120, east of engine-shaft, containing a little lead, but not enough to value. In the 95, east of Thorne's shaft, the lode is large and strong, but quite unproductive. Crosby's shaft is full of water to the 61. San Jose shaft looks very kindly, consisting of spar, carbonate of lime, and lead, worth for the latter 1½ ton per fathom. Marlin's winze is suspended, to the increase of water.

ALAMILLOS.—Sept. 22: In the 4th level, west of San Rafael shaft, the lode is wide and strong, spotted throughout with lead. The 4th level cross-cut south has its usual appearance. The lode in the 2d level, east of Magdalena shaft, is small, and the ground hard. The 3d level, east of same shaft, continues to improve, but being ugly, very little progress is made; the lode is worth 3 tons per fathom. The lode in the 3d level west is wider than our ordinary level, and continues to be rich, worth 3 tons per fathom. The 3d level, east of Taylor's engine-shaft, is very hard and unproductive. The lode in the 4th level east is wide, with a small leader of lead ore, worth 1 ton per fathom. In the 4th level west the main part of the lode is standing on the south side. The 3d level, west of San Adriano shaft, continues in the slide. The same remarks apply to the 3d level, east of Berber's winze. San Enrique shaft is the same as when last reported on. In Domingo's winze the water has somewhat diminished, and sinking resumed; the lode is worth 1½ ton per fathom.

FORTUNA.—Sept. 22: Canada Incosa—West of Taylor's Shaft: In the 100, west of O'Shea's shaft, very little has been done since last report, on account of an accumulation of stuff, which will be cleared in a few days. The 90, west of Henry's shaft, continues to open a productive piece of ground, worth 1½ ton per fathom. A change has taken place in the 8, west of Henry's shaft, and we now hope to have a valuable piece of ground; lode worth 1 ton per fathom. The lode in the 70, west of Kennedy's shaft, is small, composed of sulphate of lime and lead ore. The 70, east of Carro's shaft, is not so rich, but as we get out of the influence of the cross-course we expect it will improve. In the back of the 55 east there is a very fine lode, but in the bottom part it is small. The lode in the 45 east is more regular than for some time past, and has a very good appearance. There is no change in Judd's shaft since our last report. The sinking of Manjón's winze is again resumed. The men in Manuel's winze are making good progress; lode worth 1½ ton per fathom. Utrera's winze is situated east of Santa Tomas shaft, and in advance of the 45. South Lode: The 40, east of San Pedro shaft, is opening good ground, lode, worth 1½ ton per fathom; the lode is large, composed of sulphate of lime, quartz, and lead. In the 40 west the lode has improved, and is now producing very fine stones of lead. In Caledonia's winze the lode is large and kindly, being composed of quartz and lead. —Los Salidos Mine: In the 100, west of Morris's shaft, we have two small branches containing lead, but not enough to value. The 90 west is not quite so rich as it has been, and is now split up into small branches. In the 75, west of Bueno Amigos shaft, we are daily expecting to reach the point of the lode. The lode in the 65, west of San Carlos shaft, is very compact, and the ground hard for driving; lode worth 1½ ton per fathom. The lode in the 100, east of Morris's shaft, is small and valueless. The 90, east of San Gabriel shaft, is still opening good tribute ground, worth 2½ tons per fathom. The 75, east of Colonia's shaft, although not so rich as it was, retains its size, and we hope will improve again shortly. The 65 is opening a valuable piece of ground, worth 2 tons per fathom. Mariano's winze is poor. There is a kindly lode going down in the western end of Guillermo's winze, composed of quartz, clay, and lead. Gerona's winze is going down in a very fine lode, chiefly composed of quartz and lead ore, worth for the latter 2½ tons per fathom. Antonio's winze is communicated to the 65. The lode in Gable's winze is divided into two parts, which are looking very promising, being composed of carbonate of lime and lead, worth for the latter 1½ ton per fathom.

GONNESSA.—Capt. R. W. Rickard, Sept. 27: San Giovanni Mine:

Taylor's cross-cut has entered the limestone between 8 and 10 metres, and we are expecting almost daily to meet with the lode there. The engine-shaft is being sunk by nine men, at 225 fr. per metre. This shaft is now down 22 metres under the Victor Emanuel level. The eastern end of the Victor Emanuel level has been resumed. The lode there is large and promising, containing occasional stones of ore, but not in sufficient quantities to be estimated. The western end of the same level is being driven through a fine course of ore. The present end yields 4½ tons of ore per fathom. The No. 1 winze, sinking under this level, yields 6 tons of ore per fathom. The No. 2 winze yields 1 ton of ore per fathom. The San Barbes level has entered a hard bar of ground, which has squeezed the lode, and rendered it almost unproductive. From indications at surface, we may expect to pass through this hard bar of ground in driving 10 metres; beyond it we expect the lode will again resume its former productiveness. The No. 1 winze, sinking under this level, yields 3 tons of ore per fm.; the stopes over this level yield 9 tons of ore per fathom.—Aqua Rest Mine: The lode in the end of the San Giorgio level is very large; the part carried is ore through-out; this level is being driven by four men, at 50 frs. per metre. The No. 2 winze, on San Barbes's lode, in this mine, has reached the required depth to commence driving south, in order to communicate with the Emille cross-cut from surface; two levels have, therefore, been set, north and south, to eight men; the price for driving is 75 frs. per metre. The lode in both ends is 2½ ft. wide, and yields 3 tons of fair quality ore.—Monte Cane Mine: The regular number of tributaries are at work in this mine as during the past healthy season; they being all natives, no diminution of hands is experienced in this mine during the summer. The amount of ore raised for August month in this mine was 36 tons, and an equal quantity is calculated on for this month.—Guttura Pala Mine: Nothing new has reached me relative to the driving of the Enthoven cross-cut, the only work in hand in this mine for the present.—Gonneza Dressing-floors: The work in these floors progresses as well as we can expect for the season. We have had much trouble in getting carts to carry down the dredge ore from the mine to the dressing-floors; that difficulty is now over; however, and we expect to do much better this month and the next month than we did in July and August.—Transport of Ore: We are very sorry to be obliged to say, with respect to this part of the operations, that in spite of repeated threats and solicitations the transport agents have not, nor are they now, doing their duty.

VAL SASSAM.—T. Rickard, Sept. 29: At Tospino, in the course of the month, the San Giovanni end re-entered ore ground, and may now be valued at ½ to ½ ton of ore per fathom. The Nido end has also become productive. It is just now entering the shoot of ore which has been stopped from the surface; this end will now produce upwards of 1 ton of ore per fathom, and we hope for further improvement in the next few yards driving. In the Sopra Tortone end there is no change; it is pushing forward towards the good ground wrought above it by the Ridge stopes (new No. 1). We have raised the estimated quantity of ore in the past month—about 200 tons; the quality of it is better than that broken in August, and this is due to the occurrence of richer ground in the Ridge stopes. We do not intend stopping any more this year; the men will be employed during what the weather we may yet be favoured with to clear the ground, and to prepare things for starting on a larger scale next year. We hope in October to be able to finish conditioning the ore, and to get it all to the dressing-floors, and we have also the hope that we may be able to dress a great portion of the present accumulation before the winter sets in. You will, no doubt, be unprepared to expect that, having changed the crushing-mills in the past month, we have little sampling to announce to you from Tospino, and I hope you will be willing to put up with the temporary delay in our returns for the great advantage there is secured for the future in having got a powerful crushing-mill at work there, a thing which a little while since seemed to be almost impossible to do, the place being so badly situated for the transport of large pieces of castings. The aspect of the lodes in the stopes at this mine is very nearly the same as it was at the same period last year, when they were suspended, except the Ridge stopes, which in the last fortnight have shown more ore than before, and have turned out very good ore stuff. At Ursula's end we have made about the usual progress, through ground of very nearly the same yield as in August—2 cwt. of silver ore per fathom in the upper calcina, and 3 cwt. in the middle calcina. The tribute pitches present nothing new. We have begun making superficial explorations on the outcrops of the lodes to the west of our works; we have found ore in two new points, and hope if the weather continues favourable to have before long something still better to communicate respecting this work. The laundries have during September treated the tribute produce of July and August months, and before the end of the year we shall have worked off a great deal of our ore stuff. We have to-day delivered at the Chur Railway Station 516 kilos. (5 tons) of silver ore; we hope to have another batch of at least 5 tons more in October.

PONTGIBAUD.—W. H. Rickard, Oct. 2: Rouré: The 100 north is in a soft lode, yielding no ore to value. The 100 south shows spots of ore, but not enough to save. The 80 north, on the male lode, yields a little ore stuff of low quality. The same level, on Emily's lode, yields 3½ tons of ore per fm. The 80 south is poor. The 60 south yields 1 ton of ore per fm. The 60 north, on Emily's lode, yields stones of ore in quartz. The 40, south of Agnes' shaft, is unproductive. The winze sinking below this level yields 1½ ton of ore per fm. The 20 south is in soft poor ground. The adit south is also unproductive. The 20 south is at this time in a strong red quartz lode, yielding no ore. Our stopes continue the same in number, and of about the same value as for several months past. The tribute pitches are not quite so good.—La Grange: The sinking of Nosky's engine-shaft below the 60 metre level goes on slowly; the lode in it is hard and wet, yielding tolerably good saving work. The 60 metre level north is unproductive; the lode in it is being under-cut behind the end and yields 2½ tons of ore per fm. The 20 in the same level north yields stones of ore and muriatic. The 20 in the same direction is poor. The same level south is in soft, troublesome ground, unproductive. The stopes and tribute pitches yield pretty well on the whole.—Mocho: La Rancoune cross-cut is without change. The adit level north on No. 6 lode, is composed of soft clay, with stones of quartz intermixed. We have suspended the adit cross-cut west from railway level; it having gone beyond the line of any of the outcrops of the lodes seen at surface. We have set the level to drive south on the first lode cut, in which good stones of phosphate of lead were found at surface.—La Brousse: Basset's engine-shaft will be down to the depth of a 60 metre level by the end of this month. The 40 metre level, south of this shaft, yields 3 tons of ore per fathom; the same level north is poor. The 20 south, on the eastern part of the lode, yields 2½ tons of ore per fathom; the same level north is poor. The adit south is suspended for awhile. We are getting into very shallow ground in this direction; the same level, north of cross-cut, on the eastern part of the lode, yields

2 tons of ore per fathom. The adit, north of the little shaft, is unproductive. Our tribute pitches are looking well, and yielding good returns.—

Mining Correspondence.

BRITISH MINES.

BALLACORKISH.—M. Grose, Oct. 3: The cross-cut at the 24 is now in course of driving, with the view of intersecting the lode to the west of the shaft, which it is hoped will be accomplished in about five weeks from date. No. 1 winze is upwards of 4 fms. under the 12, and I am glad to say that the appearance of the lode as seen in the bottom is most promising, and if it continues to improve at the same rate down to the 24 we may look forward to a discovery of importance. The south forebreast has gone through several fathoms of highly mineralised ground, and is intersected with promising feeders or strings, containing lead ore and blonde. I am of opinion that if this drivage be continued southwards towards the ore ground gone down in the old cross-cut from the adit level, it will ultimately lead to profitable results. By the end of October we expect to be in close proximity to the lode in the cross-cut driving from the bottom of engine-shaft, and I am in hopes of being able to report something of importance in the No. 2 winze. All surface operations are going on satisfactorily. We are now engaged in quarrying stone for the smith's shop.

BEDOL-AUR.—H. R. Harvey, Oct. 2: The ground in the shaft continues favourable. We had some nice stones of lead from the Belli Gwyn vein in the western end of the shaft.

BOTTLE HILL.—J. Eddy, Oct. 4: Friday last being our setting-day, the following bargains were let:—Main Lode: A stopp west of the western shaft, in back of the 17, to six men, where the lode is now about 7 ft. wide, worth about 5L per fm.; let at 35s. per fm. A stopp in back of the 34, to four men; the lode here is about 5 ft. wide, worth about 4L per fm.; let at 35s. per fm. A tribute pitch east of new shaft, in back of the 12, to four men; let at 13s. 4d. in 1L; also a pitch west of new shaft, in back of the 24, to three men; let at 13s. 4d. in 1L.

We have had the rise on the south or copper lode, and shall be in course to set the driving by Saturday or Monday next.

BRADDA.—R. Barkell, Sept. 26: The engine-house is being pushed on as fast as possible, the loading is nearly up to its height, and after this is completed we hope to run up the other walls quickly. The engine has arrived in good condition, and will be discharged to-morrow. The ground at Spittle's shaft is good, and highly mineralised; we are frequently meeting with drooping branches, composed of black jack (or blonde), spar, and manganese, all of which are inclining towards the lode, and I have not the least doubt but that it will very much improve the lodes when they drop into it. The level (Prior's) we are driving towards the shaft (Spittle's) is also in a good channel of ground, but it appears that the former parties missed the lode here in driving. There is a small hollow course that crossed the lode in the present forebreast, and heaved the lode to the east; this we are now about to prove, after which the end will be continued on the course of lode, when we have a good chance for making discoveries.

The cross-cut at South Bradda is much the same as when last reported on; there are some spots of copper and lead ore in it, but not enough of either to work. **BRONFLYD UNITED.**—T. Kemp, Oct. 3: Settings for October: The stopp west of winze, above the 52, to four men, at 7s. per fm. The rise from the 52, to meet the new shaft, to four men, at 17s. The stopp below the 49, to eight men, at 50s. The tributaries are now engaged in driving through the old workings in the 40, where it is said some lead is buried under the waste stuff. The ground has improved in the new shaft, and the men are making rapid progress.

BRYNANTLLECH.—Wm. Wasley, Oct. 4: The men have finished squaring Lewis's shaft down to the deep adit level, and are now engaged in cutting lodes. The ground and lode in the end driving on the new lode has improved this week; set to four men, to drive for this month, at 4L per fathom. The men trying for slate have got upon the slate rock, and I am glad to say, looks very promising, and is now, at only about 6 feet below the surface, producing some nice slate. I have put the men to drive a cross-cut from the side of the hill, to ascertain the width of the vein; I think we shall find this vein runs through the south part of the set for about three quarters of a mile, and is situated well for working.

BRYN GWIOW.—S. Harper, Oct. 3: The lode in the 102, driving east from engine-shaft, still continues large; we are carrying only a part of it, about 6 feet in width; the upper part of the end is in a large vug, charged with clay, and intermixed with spar and fine lumps of lead ore; the under portion of the end is chiefly composed of spar, chert, and lead ore, worth of the latter about 2 tons per fathom. The lode in the 90, east of said shaft, is at present small, intermixed with spar and white shale, occasionally producing a little lead, but not to value.

In winze in bottom of the same level, about 15 fms. behind the end, the lode runs of lead, and leaving it good both in back and bottom. The lode in the 75, west of engine-shaft, is without alteration since my last, but is letting out a larger quantity of water; from such indications I expect a change for the better shortly, as we are nearing under the old men's workings. All well, we shall resume the sinking of Bramwell's shaft in the course of the present week from below the 80 yard level; the lode in this shaft is about 1½ ft. wide, at times producing fine lumps of ore. Brook's vein, in back of the 66, has of late been subject to much change by reason of cross-joints, and at present producing a little lead. The lode in the pitch in back of the 75, west of engine-shaft, is worth 2½ tons of lead ore per fathom. The pitch in back of the 75, east of engine-shaft, on the north and south lode, is worth 3½ tons per fm.

CALDBECK FELLS.—J. Kitto, S. Kitto, W. Francis, Oct. 4: The engine-shaft is now sunk to the depth of 20 fms. In the intermediate level at Mexico there is no change worthy of notice. The lode in the 30 west is looking well, and bids fair for further improvement; its present value is 8 cwt. of lead per fathom for part of lode carrying. In the 79 west the lode has greatly improved, and is worth full 15 cwt. of lead per fathom. The 80, east and west on the south lode, is much the same as when last reported. The lode in the 80 west, on the caunter lode, is worth 3 tons of lead per fathom; we are sinking a winze below this end to communicate with the 90, the lode in which is worth full 3 tons of lead per fathom. In the 90 west, since our last report, the caunter and north lode have formed a junction; the lode at present for the part carrying is worth 2 tons of lead per fathom. The 90 east, on the south lode; when this is accomplished we shall at once commence sinking in this lode. We are cross-cutting the lode in the 90 east, on the south lode; the stopp in the back of the 30 are looking the same as when last reported, worth in the aggregate 4 tons 10 cwt. of lead per fathom. Shield's stopp, in the back of the 40, is worth 10 cwt. of lead per fathom. Robinson's stopp, in the back of the 90, is worth 22 cwt. of lead per fathom. Clare's stopp, in the back of the 90, is worth 3 tons of lead per fathom. Harris's stopp, in back of the 90, is worth 13 cwt. of lead per fathom. We are now crushing and dressing, and the machinery is working well. On the walls of the engine-house we have ten masons employed daily, and are getting on as fast as the weather will permit. All operations are being pushed forward with the greatest vigour.

CAMBORNE VEAN.—N. Clymo, Oct. 4: In the winze sinking below the 120 the lode is 2 ft. wide, worth 2 tons of copper ore per fm., and improving. The 135, east of Grylls' shaft, will turn out full 7 tons of copper ore per fm. In the winze sinking under the 135 the lode is 2 ft. wide, worth 2 tons of copper ore per fm. In the 150, east of Grylls' shaft, the lode is 1 ft. wide, worth 1 ton of ore per fm. In the 170, east of Grylls' shaft, the lode is 3 ft. wide, worth 3 tons of ore per fm.

CARADON CONSOLS.—S. Bennetts, Oct. 2: The ground in the winze continues favourable for sinking, scarcely any water to contend with, and the lode without alteration. In the cross-cut south the ground is slightly harder; no lode as yet. There has been but very little lode taken down in the 80 west since last report. The stone in the 70 is worth 3L per fathom.

CASTELL CARN DOCHAN (Gold).—J. Parry, Oct. 4: I have set the raising of the stuff, and its delivery on the spelling-floors, for this month at 5s. per ton. The lode in the stopp keeps up its usual width, and a few specks of gold were seen in the stuff from No. 3 stopp yesterday. I have set the spelling of the stuff for the month, and its delivery in the stamp-hoppers, at 1s. 3d. per ton. The quantity of stuff stamped last month was 161 tons. Gold obtained to-day 12 ozs. 5 dwt.

The remainder of last month's produce will be ready for melting this day week. We shall start the stamps again this afternoon—12 dials.

CENTRAL MINERA.—T. Hughes, Oct. 4: Victoria Engine-shaft: The lode in the stopp in the bottom of the 50 yard level, west from the rise, is worth 1 ton of lead per fm., and very promising. The ground in the 40 yard level west contains of black limestone. I am daily expecting an improvement in this end, as we are now close upon where the adjoining company left a good lode of lead.

CHIVERTON MOOR.—W. Tonkin, Oct. 1: The flatiron shaft is sunk 3 ms. below the 50; the ground has undergone a change, and has become more favourable for sinking. The 50, driving west, is driven back to the cross-course; this end is suspended. In the 50, driving east, the lode is about 2 feet big, composed of manganese, spar, and stones of lead occasionally, but not sufficient to value. In the 40, driving east of the said shaft, the lode in end is disordered, with occasionally spots of lead, but not sufficient to value. A stopp working in the back of the level is worth 3L per fathom.

CLARA UNITED.—J. Davis, Oct. 3: Settings for October: The 50 to drive west, to four men, at 18s. Stop No. 1, in back of the 50, to two men, at 7s. Stop No. 2, ditto, to four men, at 7s. Winze No. 2, under the 30, to two men, at 12s. The shaftmen are progressing satisfactorily with their contract. No. 3 change in the value of the several bargains.

CRENNER AND ABRAHAM UNITED.—Wm. Kitto, Oct. 4: We shall finish clearing out the 70 west from St. George's shaft to-day; it is extended about 15 fms.; the lode is from 3 to 4 ft. wide, composed of manganese, with good stones of copper ore. A small portion of ground has been taken away by the old workers in the back adjoining the shaft. We hope (as stated in my last report) to set two tribute-pitches, one in the back and one in the bottom of the level. We are now engaged taking down a piece of ground at the south side of the shaft, to make a narrow road to wheel out the stuff from the six men's shaft. The lode in the pitch is much the same as last reported, the men getting fair wages out of it. We shall begin on Monday next to clear the choke in St. George's shaft below the 70 with the machine whin-kibble, and shall drop down a ladder, that the men may go to the level above every kibble that is drawn to surface for safety. The 60 is cleared about 8 fms. east of shaft. We shall clear about 4 fms. further, and then clear up the bottoms, to see what ground has been taken away by the old workers, and where to sink a winze if we think it necessary. We sampled last Tuesday about 70 tons of copper ore, of better quality than the last, and 145 tons of manganese.

CROWN AND WENDRON.—R. Reynolds, Oct. 2: The engine-shaft is sunk 3 fms. below the 60, and the shaftmen are progressing satisfactorily. In the 60 west the lode is large, but not quite so promising as for the last two or three weeks past. In the 60 cross-cut we have cut some sparry branches, and hope to reach the lode shortly. In the 48 east we are now approaching the junction of the the lode with the engine lode, and hope soon to prove this point.

CUDDRA.—F. Puckey, Oct. 3: There is no alteration to notice in any of our underground operations since last week's report.

CWM ERFIN.—Oct. 3: The lode in the stopp in the back of the 20 fm. level is 2 feet wide, and worth 15 cwt. of lead ore per fathom. The 10 fm. level, east of the boundary, has reached the cross-course spoken of in our former reports; the same is 4 feet wide, containing killas, quartz, and flookan, with an underlay of about 2 feet in a fathom. We purpose extending the level thoroughly through it, and if no alteration in the lode takes place for the better, to suspend it for the present. We have three stopp working over the back of the 10 fathom level, in which 16 men are employed; the lode varies from 3 to 7 feet wide, and will yield on an average 1 ton of lead ore per fathom. The lode in the deep adit level, east of the boundary, is very small and poor. The lode in the various stopp over the back of the deep adit level continues to look very well, yielding on an average 1½ ton of lead ore per fathom. There is no alteration in the rise

over the back of Taylor's drift since the last report. We expect to effect a communication here with the winze sinking below Williams's level daily. The lode in the stopp over the back of Taylor's drift, east of the footway winze, has slightly improved, and will now turn out 15 cwt. of lead ore per fathom. We expect this stopp to further improve as we get off the influence of the cross-course. The lode in the stopp over the back of Williams's level, 30 fms. east of the cross-cut, is 3½ feet wide and worth 2 tons of lead ore per fathom. The lode in the stopp over the back of ditto, 20 fms. east of the cross-cut, is 4 feet wide, and worth 1 ton of lead ore per fathom. The lode in Prys's level, going east from the side of the hill, is 20 inches wide, composed of killas, quartz, and soft flookan, with spots of lead ore occasionally. The men are making fair progress in the cross-cut south, in the western part of the sett. Agreeably to the plan, the lode we have about 7 fms. more to drive to cut the lode.

DARREN.—R. Williams, Oct. 3: The casing and dividing the shaft to the 25 has been completed, and the 25 has been let to drive to six men, at 7L per fm. for 2 fms., required for the length of the pit; we shall push on this work as fast as we can, and hope to cut plat and drive on at the same time, after the two fathoms are spent; when we cut the plat we shall open most, if not all, the lode in width at this point, and consequently prove its composition, and we expect to find it productive. Oliver's level has been let to six men, at 6L 10s. per fm., and pay all cost; the lode here has an improved appearance, and we expect to see a more favourable change soon. The intermediate level to drive west in the back of the level Coed has been let at 5L 10s. per fm.; the lode here produced some good ore, and is opening ground for a good stopp as far as can be seen. On the whole, our prospects are improving fast, and we calculate on making good profits.

DEER LEVEL.—Oct. 1: The vein in the deep level is nearly 3 ft. wide, and contains a little ore, about 1 cwt. to the yard. Since our last report we have cut into a small cross-joint, out of which water issues very freely; the ground is becoming more sparry as the end approaches Pant-y-go-vein. The 174 yard level, west of Pant-y-go-vein, has gradually improved since the vein formed firm walls. The vein is 3 ft. wide, composed of spar and clay, in which there are fine lumps of ore occasionally met with. The men who are driving west on the south side of Pant-y-go-vein have not yet got into whole ground, but last week, while fixing timber, they discovered several lumps of ore, the largest of them weighing about 4 cwt.; this we intend to bring to surface to-morrow without accident, if possible.

DEVON AND CORNWALL UNITED.—T. Nell, Oct. 2: The whin-shaft is sunk to the 46, and we have commenced driving east. The lode in the 34 east is 3 ft. wide, worth 7 tons of ore per fm. We have one stopp working in the back of this level, lode worth 6 tons of ore per fm.; and one stopp in the 22, west of whin-shaft, is worth 7 tons per fm. The lode in the 34, west of engine-shaft, is worth 4 tons of ore per fm.—**DYFNGWM.**—E. Davies, Oct. 4: The end of the 82, driving west, yields about 12 cwt. of lead ore in the last fathoms driven. The four stopp behind this end continue without any change.

EAST CARADON.—J. Truscott, Oct. 3: Caunter Lode: The 100 east is worth 5L per fathom; the 100 west producing saving work; and the 90 east has largely fallen off in value, the lode being very speedy, but expect it will soon improve. The 90 west is poor. New Lode: The 70 east produces saving work.—South Lode: The 90 east is worth 5L per fathom; the 70 west, saving work; and the 70 east, on south part, 15L per fathom.

EAST DARREN.—Oct. 2: Taylor's Shaft: In the 116 east the lode is unproductive; the ground has become soft, and broken up by a slide; at this point we think to suspend driving for the present, and put the men to sink a winze below the 104 east, to prove whether we are on the right part of the lode or not, instead of driving a cross-cut south. In the 104 east the lode is from 3 to 4 feet wide, composed of clay-slate, carbonate of lime, and producing saving work for dressing.

In the pitch over this level, 15 fms. west of Taylor's shaft, the lode is 22, west of whin-shaft, is worth 7 tons per fm. The lode in the 34, west of engine-shaft, is worth 4 tons of ore per fm.—**DYFNGWM.**—E. Davies, Oct. 4: The end of the 82, driving west, yields about 12 cwt. of lead ore in the last fathoms driven. The four stopp behind this end continue without any change.

EAST JANE.—T. Hodge, J. Seccombe, Oct. 4: The lode in the 48 north end

maintains its size, and at this time yields good stones of ore. The lode cut in the 48 cross-cut we think is the South Jane old western lode; it is composed of white iron, soft spar, prian, flookan, and lead—a promising looking lode, and from its appearance we expect an early improvement. In the 36 cross-cut east the ground continues favourable; here we expect to intersect the old western lode in about 10 fms. more driving. We consider this cross-cut a rather important point, being lieveing from the appearance of the lode seen in the adit level, where there is a splendid gossan lode going down, that our chances of meeting with a productive lode at the point of intersection are very great. In the 26 cross-cut east the lode is favourable, and seeing the water oozing out strong from the end leads us to believe that the lode is near at hand.

EAST ROSEWARNE.—J. James, Oct. 1: We have sunk King's shaft 3 fms. 3 ft. 6 in. below the 83; the first 2 fms. in the evan course, in a lode 18 in. wide, producing good stones of ore; since we have been through the evans we have met with a slide, which has disordered the lode; it is now getting more settled, and is about 1 foot wide, producing good stones of ore; we expect improvement here, as the old ground driven through west of Hallett's shaft is dipping in this direction. The 85 has been driven east of Hallett's shaft 1 fm. 3 ft.; lode poor, and the driving suspended. The 85 has been driven east of King's shaft 11 fms. 2 ft. in a small lode, producing occasional stones of ore; the same level has been driven west of Hallett's shaft 10 fms. 2 ft. 6 in., and holed through to King's; in this driving we had a lode varying from 9 in. to 18 in. wide, generally mixed with the slide, and producing a little ore. I think we shall find the lode productive in stopping over and under this slide. The 85 has been driven west of King's shaft 11 fms. 3 ft. 6 in., in a lode varying from 6 in. to 2 ft. wide, and worth for about 6 fms. 4L to 8L per fm.; in the last 2 fms. the ground has been harder than usual, which has caused the lode to be small and unproductive; in the present end the ground is improving, and a good branch of ore, 6 in. wide, towards the bottom of the level; the water is oozing from it, which is a good feature: we are rising in the back of this level, about 16 fms. west of shaft, and are up about 3 fms., in a lode 1 foot wide, worth 7L per fm.; I think this will open profitable ground, there being a good lode in the bottom of the 75. The 75 has been driven west of King's shaft about 3 fms., in a lode 15 in. wide, worth for 9 feet in length 5L per fm.; in the present end there is a good branch of ore in the bottom of the level, but poor in the back. The two stopp in back of the 85, between Hallett's and King's shafts, are worth 12L and 7L per fm. respectively. The stopp in bottom of the 75, east of King's, is worth 6L per fm.; the stopp in back of the 75, east of King's, is worth 7L per fm.; and the stopp in back of same level west is worth 4L per fm.

EAST ROSEWARNE.—Oct. 2: In the 80 west end, or the south end, but is showing stronger spots of lead; set to two men for the month, at 10L per fathom.

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EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Sept. 29: Setting Report: The 95 west, by six men, at 7L per fm.; lode 20 in. wide, with a little ore and manganese, embedded in quartz, &c. The 85 west, to six men, at 6L per fm.; lode 15 in. wide, also producing stones of ore, &c. The stopp above this level to four men, at 20s. per fm.; lode worth 2½ tons of ore per fm. The 75 east, to six men, at 5L 10s. per fm.; lode 20 in. wide, of quartz and prian, with a little ore and manganese; we are not yet clear from the number of small cross-courses that we have been meeting with of late. The 75, east of cross-course, on the north branch, by two men, at 8s. per fm.; lode 8 in. wide, with good yellow and black ore, but not in sufficient quantities to value, although a very kindly lode. The stopp below the 75 west, by four men, at 3L per fm.; lode worth 8L per fm., and for about 6 fms. 4L to 8L per fm.; in the last

With the Journal of last week was given a SUPPLEMENTAL SHEET, in which appears—a Report of the South Wales Institute of Engineers' meeting, at Cardiff—Comparative Systems of Coal Mining in the North of England and South Wales—Application of Iron to Pit-Head Framing and Engine Seats—Mineral Resources of Italy—What is Copper used for in India?—Cornwall: its Mines and Mining—Improvements in Boring and Blasting (Illustrated)—Japanese Alloys, &c.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, OCT. 5, 1866.

COPPER.		£ s. d.	£ s. d.	IRON.	Per ton.
Best selected	p. ton	89	0	Bars Welsh, in London	7 2 6
Tough cake & tile	88	0	91 0 0	Ditto, to arrive	7 0 0
Burra Burra	90	0	100 0 0	Nail rods	7 10 0 9 5 0
Copper wire ...p. lb.	0	113 1/2	—	Staffd. in London	8 10 0 8 17 6
Do. tubes	0	129 1/2	—	Bars ditto	8 10 0 10 0 0
Sheath. & bolts p. ton	91	0	0	Hoops ditto	9 5 0 10 0 0
Bottoms	96	0	0	Sheets, single	10 0 0 11 0 0
Old (Exchange)	77	0	0	Pig No. 1, in Wales	4 5 0 4 0 0
BRASS.	Per lb.	—	—	Refined metal, ditto	4 0 0 5 0 0
Sheets	per lb.	10 1/4 d.	—	Bars, common ditto	6 5 0 6 10 0
Wire	9 1/2 d.	—	—	Do. mch. Tyne or Tees	7 10 0
Tubes	11 d.	—	—	Do. railway, in Wales	6 0 0 6 5 0
Yellow Metal Sheath. p. lb.	7 1/2 d.	—	—	Do. Swed. in London	10 15 0 11 0 0
Sheets	7 1/2 d.	—	—	To arrive	11 0 0
SPelter.	Per ton.	—	—	Pig No. 1, in Clyd.	2 15 6 3 0 6
Foreign	20 10 0	—	—	Do. f.o.b. Tyne or Tees	2 9 6
To arrive	20 10 0	—	—	Do. Nos. 3, 4, f.o.b. do.	2 6 6 2 7 0
ZINC.	—	—	—	Railway chairs	5 10 0 15 5 0
In sheets	27 0 0	—	—	Do. spikes	11 0 0 12 0 0
TIN.	Per ton.	—	—	Indian Charcoal Pigs, in London p. ton	7 0 0 7 10 0
Engl. blocks	85	0	0	STEEL.	Per ton.
Do. bars (in barrels)	86	0	0	Swed., in kegs (rolled)	14 0 0 14 10 0
Do. refined	88	0	0	Ditto, (hammered)	16 0 0 16 10 0
Banca	80	0	0 80 10 0	Ditto, in faggots	10 0 17 10 0
Straits	79	0	0 80 0 0	Ditto, sheet	21 10 0
TIN-PLATES.*	Per box.	—	—	Ditto, red lead	23 10 0 24 0 0
IC Charcoal, 1st qua.	1 14 0	—	—	Ditto, white	27 0 0 30 0 0
IX Ditto, 1st quality	2 0	0	—	Ditto, patent shot	23 15 0 24 0 0
IC Ditto, 2d quality	1 10	0	—	Ditto, at works	19 10 0
IX Ditto, 2d quality	1 16	0	—	At the works, ls. to 1s. 6d. per box.	—

REMARKS.—The Metal Market during the past week has presented an appearance of considerable quietness, and the amount of actual business transacted has not been by any means extensive; nevertheless prices, generally speaking, continue pretty firm, although in some cases they are rather easier, still we imagine the present state of things is merely temporary, and that we shall soon again experience an active condition of the metal trade. The Money Market being now easy, and the rate of interest low, with a prospect of being still lower ere long, great facility is offered for operations in metals, especially in the present condition of the metal market, and we have no doubt we shall soon find that speculators will avail themselves of the opportunity afforded to enter largely into operations. The orders from America are not quite so large as was expected, but it is anticipated that some extensive transactions will be entered into with the United States between now and the end of the year. Indian orders still continue very limited, and it is discouraging to find that the present state of affairs there is such that no considerable improvement can be expected at present; this is the more to be regretted, as the quantity of metals shipped to India has now for so long a period been very small, in comparison with what used formerly to be sent to that country.

COPPER.—The market for this metal during the week has been rather inactive. The demand for raw, which was lately so active, has considerably abated, and foreign also is not so much enquired for. In manufactured also very little is doing.

IRON.—In Staffordshire, now that it is settled that no alteration will be made in prices, it is expected that those orders which were kept back upon the possibility of a reduction taking place at the preliminary meeting will be given out. There are rather more orders for bars and plates from buyers who have usually supplied their wants from the North, where the works are now standing; but few works are doing more than three days' work per week. The men appear to prefer this to a reduction of wages, and the masters are not disposed to enter into a contest at the present moment. Pig iron is not selling at all freely, and the consumption is considerably below the average. In Welsh the improvement is still maintained, and the enquiries bear a more business-like character. Foreign orders do not come in so freely as desired; but the markets of British North America and the Baltic are commencing to give out orders for spring delivery, and on Continental account a few contracts have been placed, while the reports received point to a larger amount of business being transacted as affairs settle down. The foreign exports of rails have been limited, chiefly for the Russian and South American markets. In home transactions there is not much progress to report; buyers are purchasing as sparingly as possible; but as the Bank rate is now down at a low point, and the Preliminary Meeting of Ironmasters have decided on maintaining the old list prices, it is anticipated they will now enter the market more freely with orders. In Swedish iron there is rather more enquiry. In Scotch pig-iron the fluctuations have been very trifling during the week, but, upon the whole, the price has rather improved, the last quotation received from Glasgow being 54s. 6d.

LEAD.—The demand continues very steady, especially for pig, and prices are somewhat firmer.

TIN.—On Tuesday the smelters of English announced a decline of 3d. per ton, making present prices 85l. for blocks, 86l. for bars, and 88l. for refined; but as sales in second hands had been previously made at the reduction, no increase of business has taken place. In foreign the market remains inactive, and prices show a downward tendency. The present quotation for Straits is 79l. to 80l. and for Banca, ex sale, 80l. to 80 1/2 l. In Holland the stock of Banca on warrants on Sept. 29 was 89,900 slabs, against 132,169 slabs same time last year; and arrived towards next sale 34,554 slabs, against 48,788 slabs same time last year. The stock of foreign in London on the 1st inst. was 3112 tons, against 3142 tons same time last year, and the quantity of Straits afloat for Europe is 899 tons, against 1748 tons some time last year.

SPELTER.—The stock in London on the 1st inst. was 5827 tons, being a decrease of 801 tons during the month, and in consequence of this it is held more firmly, holders asking 20l. 10s. on the spot.

TIN-PLATES.—More activity is evinced, and makers are well supplied with orders.

STEEL and QUICKSILVER without alteration.

BIRMINGHAM, OCT. 5.—Ryland and Co.'s "Iron Trade Circular" says—Market torpid. Marked pigs at the same prices, but unsteady, and the demand extremely small. Common makes generally lower. Finished iron dull.

COAL MARKET.—Although only 88 ships arrived this week, the market for house coals ruled dull, and we have to report a further reduction in prices of 6d. per ton, which led to almost a clearance. Hartley's and manufacturers' coals have continued a steady business at previous prices. Hetton Wallsend, 21s.; Haswell Wallsend, 21s.; South Hetton Wallsend, 21s.; Braddyll's Hetton Wallsend, 19s. 9d.; Hetton Lyon's Wallsend, 18s. 6d.; Hastings Hartley, 18s. Unsold, 4 cargoes; 40 ships at sea.

THE TIN TRADE.—Mr. L. Th. van Houten (Rotterdam, Sept. 30) writes—The tin market has been dull this month, and under the influence of the Trading Company's public sale, which took place yesterday, holders have submitted to lower prices. In Banca some sales were reported at 48 fl. in the beginning of the month, from which the market gradually declined to 46 fl.; yesterday the 109,359 slabs offered in public sale fetched 46 fl. Billiton has been in limited request; the slabs brought forward by the Trading Company were sold at 45 1/2 fl. to 45 1/4 fl.

The following statement shows the position of Banca tin in Holland on Sept. 30, from the official returns published by the Dutch Trading Company:—

	1866.	1865.	1864.
Import in September	Slabs 7,327	.....	6,120
Total nine months	161,889	.....	138,088
Deliveries in September	7,958	.....	9,450
Total nine months	118,705	.....	103,442
Stock second hand (old warrants)	89,900	.....	132,169
ex sale, Sept. 28	109,359	.....	84,950
Total second-hand	199,259	.....	132,169
Unsold stock	34,554	.....	48,788
Total stock	233,813	.....	180,957
Quotation, Sept. 30, new terms	46 1/4 fl.	.....	59 1/2 fl.

The preceding returns compared with those of 1865 exhibit—An increase of the import for September of 1207 slabs, equal to 38 tons; an increase of the import for the nine months of 23,801 slabs, equal to 750 tons; a decrease of the deliveries for September of 1500 slabs, equal to 47 tons; an increase of the deliveries for the nine months of 15,263 slabs, equal to 481 tons; an increase of the stock second-hand of 67,990 slabs, equal to 2113 tons; a decrease of the unsold stock of 14,234 slabs, equal to 448 tons; an increase of the total stock of 52,856 slabs, or 1665 tons; and a decline in the quotation of 8 1/2 fl. equal to 137. 15s. per ton. The Government returns for the month of July are as follows:—

	1866.	1865.	1864.	1863.
EXPORT OF TIN.	July.	Seven months.	Seven months.	Seven months.
1866.	1865.	1864.	1863.	1864.
Germany	Tons 16	270	311	1239
Belgium	16	119	94	279
England	—	89	102	420
France	108	189	224	900
Hamburg	12	47	49	179
United States	—	32	3	159
Other countries	1	98	36	194
Total	153	844	819	3414
According to the official returns, the import of tin for consumption in France has been—	July.	Seven months.	Seven months.	Seven months.
1866.	1865.	1864.	1863.	1864.
England	Tons 168	119	132	1272
Belgium	1	16	25	—
Holland	139	217	178	1191
Other countries	12	48	5	369
Total	320	384	331	2597
At the works, ls. to 1s. 6d. per box.	—	—	—	—

Messrs. Von Dadelson and North (Oct. 2) write—The margin at present existing between foreign and English tin is so unusually large, that either Cornish tin must come down or foreign advance; this will, probably, be apparent within the next few days. If the former takes place it must cause serious injury to Cornish miners, leading to the stoppage of mines, and further exodus of the mining population, which is very much to be deprecated. The opinion in well-informed quarters is that the large quantity of Banca sold in the two last sales arises from an accumulated stock which existed in Batavia; this having been brought forward to Europe is now disposed of, and the effect of the short production of the Banca Mines in 1865 will be plainly felt during 1867. Consumption is going on an extended scale, and all manufacturers in which tin is concerned are in large and increasing demand. Our advices from the East led us to anticipate a falling off in the supply of tin from that quarter, as is proved by the quantity now afloat for England being only one-half what it was at this time last year. For general comparison, we subjoin the arrivals of Banca in slabs during the three-quarters of the year in Holland, from which, too, we see a confirmation of our idea of the shipment of accumulated stock:—Arrivals during January to March, 66,084 slabs; April to June, 59,662 slabs; July to September, 36,599 slabs. On the other hand, we must not forget the very large stock which now exists, and which it must take some time to get rid of; but we must also remember that by far the largest part of the stock is held by parties who know the article well, and who have bought with their eyes open, believing that tin is below its legitimate cost, and that in the course of time price must rise, to give them an equivalent profit for the risk they have had to run. The quantity of tin here and in Holland on Sept. 30 was as follows, compared with the three preceding years:—

	1866.	1865.	1864.	1863.
Stock in Holland	192,259	6370	132,169	4230
Arrived for next sale	34,554	1100	45,788	1560
Billiton in Holland	400	—	38,996	1250
Stock here	3112	—	3666	—
Total tons	10,982	8932	7636	6850

The quantity of tin now afloat for England is 899 tons, against 1660 tons last year, and to the Continent nil.

THE COPPER TRADE.—Mr. Pitcairn-Campbell, Liverpool, reports—The quiete notice in our last has developed itself further, and we have to report decided flatness in the demand both for English copper and the raw material, with a declining tendency. It is difficult to account for this, except upon the grounds of reaction upon recent activity. Money continues easy, the Bank of England having again reduced its rate, to 4 1/2 per cent. The mail just arrived from the West Coast, with dates to Aug. 17, brings advices of a fair amount of charters. Estimates of shipments for the third quarter are about 10,000 tons fine copper. Actual shipments in July, 82

made up for seven months—from Dec. 1, 1865, to June 30, 1866. Mr. Jennings, an active shareholder, quoted items from the accounts for the purpose of proving that the company, instead of being reduced to most unfortunate circumstances, as some people thought, had assets to the amount of 99721. 17s. 4d., which showed a profit since the present company commenced the mines of 45171. 17s. 4d. He thought this fact should go abroad, and that the shareholders need not despair, for their affairs were prosperous. The directors, who retired by rotation—Messrs. Markham, Brown, and Thomas Mackie—were re-elected. The report of the directors of the Wicklow Copper Mining Company, of which we give a copy in another column, shows the most substantial proof possible of the prosperous state of the affairs of this company by recommending the declaration of a dividend for the present account half-year of 18s. per share, or at the rate of 72 per cent. per annum on the amount of 27. 10s. per share paid-up. The report affording a clear insight into the past, present, and future state and prospects of this company, we confine ourselves to giving here only a practical repetition of its first paragraph, which is to this effect—"On approaching the 40th year of the existence of the Wicklow Copper Mining Company, the directors are enabled to propose to the shareholders the acceptance of the largest half-yearly dividend ever paid, and to congratulate them on the efficient state of their property, so successfully developed under the able management of Mr. Edward Barnes. Since March 1, 1856, including the dividend now proposed, the proprietors will have received in dividends 160,175l., of which 27,200l. will be the amount divided for the year just closed."

The dealers in all mining shares have during the last three weeks been on somewhat reduced scale, chiefly in consequence of the still languid state of the money market in England, and of an apprehension that we shall not have much easier times before the commencement of January next. The fluctuations in the prices have not been great in any instance. Wicklow Copper shares are now sought at 23l. 10s. to 23l. 12s. 6d. for cash and account, and Mining Company of Ireland shares (7d. paid) are dealt in at 21l. 10s. Connoree shares are on sale at 16s., and General Mining Company for Ireland shares would be taken at 2l., and are offered for sale at 2l. 10s.

The following are the Government Returns of the export of articles identified with mining, the produce and manufacture of Great Britain, for the eight months ending Aug. 31, 1866; and also as compared with the eight months ending Aug. 31, 1865; extracted from the "Accounts relating to Trade and Navigation," published by the Board of Trade:—

DECLARED VALUE FOR THE EIGHT MONTHS ENDING AUGUST 31.

	1865.	1866.	Increase.
Coals and culm	£2,900,420	£3,395,655	£ 455,235
Hardware and cutlery	£243,514	£324,677	
Agricultural implements	355,988	327,695	
Other sorts	2,133,108—2,732,610	2,265,897—2,858,269	125,659

Machinery	1,290,538	967,779	
Steam-engines	2,156,126	3,446,661	1,890,985—2,848,764
Other sorts	—	—	—

Total	£9,079,694	£9,102,688	—
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Metals—Iron—Pig	999,592	996,008	
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Bar	1,360,426	1,542,804	
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Railroad	2,290,705	2,892,614	
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Wire	283,251	302,665	
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Ditto telegraphic	108,619	285,054	
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Castings	499,166	504,538	
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Hoops	962,126	1,207,051	
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Wrought	1,578,744	1,820,937	
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Oil	4,860—7,807,489	6,675—9,579,046	1,681,557
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Steel—Unwrought	280,926	538,987	268,291
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Wrought	1,570,369	1,274,530	—
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Other sorts	118,560—1,969,855	95,936—1,772,217	—
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Brass	—	145,843	149,903
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Lead—Pig	357,777	449,260	4,060
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Oil	112,188	449,985	158,067—607,267
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Tin—Unwrought	307,237	260,551	—
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Tin-plates	937,728	1,306,123	362,395
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Zinc	52,889	82,245	29,356
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Grand total	£21,379,687	£23,592,131	£3,054,868
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Less decrease	Machinery, 597,900l.; copper, 197,638l.; tin unwrought, 46,886l.	—	842,424
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Total increase	—	£2,212,444	—
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Imports	Exports	Imports over exports	Exports over imports
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Australia	£3,953,638	£ 38,781	£ 3,914,857
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Belgium	197,676	872,910	£ 675,234
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British South Africa	8,099	4,867	—
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British Columbia	—	—	3,232
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British North America	145,453	56,857	—
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Brazil	246,680	869,033	622,323
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Egypt	97,576	2,773,566	2,675,999
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France	4,190,208	8,811,649	4,621,441
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Gibraltar	66,783	1,238	—
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Hans—Towns	1,305,343	904,713	—
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Holland	112,784	534,659	421,878
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Malta	25,349	—	25,349
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Mexico, &c.	3,683,697	322,937	—
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Portugal	391,474	60,002	—
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Spain	19,818	148,609	128,791
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Turkey	155,584	8,597	—
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United States	90,051,187	358,251	—
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West Coast of Africa	86,644	42,269	—
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Other countries	767,405	553,617	213,788
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Imports	Exports	Imports over exports	Exports over imports
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£24,554,428	£16,362,522	£9,145,654	£17,337,560
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Less exports over imports	—	9,145,654	—
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Balance	—	£8,191,906	—
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At Redruth Ticketing, on Thursday, 3793 tons of ore were sold, realising 14,830l. 12s. 6d. The particulars of the sale were:—Average standard, 1062. 16s. 0d.; average produce, 61 $\frac{1}{4}$; average price per ton, 31. 18s. 0d.; quantity of fine copper, 236 tons 10 cwt.

The following are the Government Returns of the Imports and Exports of Gold and Silver Bullion and Specie for eight months ending Aug. 31, 1866, from and to the undermentioned places, showing the respective results in favour of and against this country; extracted from the "Accounts relating to Trade and Navigation," published by the Board of Trade:—

DECLARED VALUE FOR THE EIGHT MONTHS ENDING AUGUST 31, 1866.

Imports.	Exports.	Imports over exports.	Exports over imports.
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Australia	£3,953,638	£ 38,781	£ 3,914,857
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Belgium	197,676	872,910	£ 675,234
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British South Africa	8,099	4,867	—
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British Columbia	—	—	3,232
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British North America	145,453	56,857	—
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Brazil	246,680	869,033	622,323
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Egypt	97,576	2,773,566	2,675,999
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France	4,190,208	8,811,649	4,621,441
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Gibraltar	66,783	1,238	—
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Hans—Towns	1,305,343	904,713	—
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Holland	112,784	534,659	421,878
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Malta	25,349	—	25,349
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Mexico, &c.	3,683,697	322,937	—
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Portugal	391,474	60,002	—
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Spain	19,818	148,609	128,791
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Turkey	155,584	8,597	—
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United States	90,051,187	358,251	—
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West Coast of Africa	86,644	42,269	—
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Other countries	767,405	553,617	213,788
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Imports	Exports	Imports over exports	Exports over imports
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£24,554,428	£16,362,522	£9,145,654	£17,337,560
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Less exports over imports	—	9,145,654	—
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Balance	—	£8,191,906	—
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WATSON AND CUELL'S MINING CIRCULAR.

WATSON AND CUELL,
MINING AGENTS, STOCK AND SHARE DEALERS, &c.,
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MESSRS. WATSON AND CUELL having made arrangements for transferring their weekly Circular, which has had so large a circulation during the past ten years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and the state of the share market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs.

WATSON and CUELL have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON and CUELL they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON and CUELL transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON and CUELL also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON and CUELL are also daily asked their opinion of particular mines, as well as to "recommend" mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON and CUELL having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in rendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

"J. P." (Dublin).—We advise you to send your own agent: or if you do not know one, a good and independent inspection can be got for 2*l.* 2*s.* "D. L." (Bristol).—Not in the market, and never was. We cannot say from whence the quotation referred to was taken. The prices of the *Mining Journal* are from the Mining Exchange, and made up at 4 o'clock on Fridays.

CORNWALL: ITS MINES AND MINING—No. III.
PAST, PRESENT, AND PROSPECTIVE.

During the last few years the production of copper in Cornwall has considerably decreased, but at the same time the supplies imported from foreign countries have been largely augmented. In the year 1865, 9750 tons of pure copper, extracted from 159,409 tons of ore, were sold in Cornwall. The amount raised in the rest of Great Britain was about 30,000 tons of copper ore, containing 2100 tons of copper, while during the same period there were imported into England 33,686 tons of regulus, or copper ore partially smelted, and 82,562 tons of copper ore. By far the largest amount was from Chile, whence we received 36,513 tons of regulus, besides 21,801 tons of ore. All the other imports of copper are comparatively insignificant when compared with such vast quantities, and Cuba, though second, is a long way behind, with 10,099 tons of regulus, and 15,721 tons of ore.

Up to the middle of October last there was very little fluctuation in the price of copper last year. Prices had varied from 8*s.* to 9*s.* for rough cake copper, remaining finally at 8*s.* per ton. Rises took place to 9*s.*, 9*s.* 6*d.*, and then to 11*s.* per ton, showing an increase of 2*s.* in a single week. These rapid rises were caused by the announcement of the blockade of the Chilean ports. This comparatively high price was maintained for five weeks, when there was a drop to 10*s.* For the first few months of this year the price continued to fall, until by the middle of March the price for rough cake was 9*s.* per ton. Further declines were experienced in April, May, and June, and 8*s.* was then asked for rough cake copper. Soon after the reduction of the rate of discount from 10 per cent. to 8 per cent. copper went up *M.*, making the price for rough cake 9*s.* per ton. Since that time, though there has been no further advance, no copper can be bought at less than 9*s.* per ton.

During the quarter ending March 30 last there were sold by ticketing in Cornwall 36,711 tons of copper ore, for 187,493*l.*, containing 2220 tons of copper. During the quarter ending June 30 last there were sold 34,468 tons of ore, producing 145,455*l.* Of the 116 mines which sold copper ore during the quarter 35 had more than 1000*t.* Since Midsummer there have been sold 25,867 tons of ore, and at the next two sales 5543 tons will be sold, so that during the present year 97,044 tons of copper ore have been sold in Cornwall, which amount by September 20 will be increased to 102,887 tons.

The shipments of copper from Chile and Bolivia during the first and second quarters of this year were:—First quarter, 13,339 tons; and second quarter, 10,238 tons; total, 23,597 tons; being a decrease of nearly 3000 tons on the corresponding quarters of last year. The charters from Chile advised by the last mail represent about 1000 tons of fine copper, and the depressing account they would subsequently receive would, no doubt, deter shippers.

During the past fortnight ores, regulus, and bar copper have been in very active demand. The available stock of bars, ores, regulus, and English copper in Liverpool, Swansea, London, and Havre on Sept. 1st, 1866, is estimated in fine copper at 18,786 tons, being an increase of 2000 tons on the stock held on Sept. 1, 1865, and of nearly 1000 tons on that held on Sept. 1, 1864.

Having thus brought the history of copper and tin mining down to the latest dates, we proceed to state a few of the disadvantages under which Cornish mining labours at the present time.

One of these disadvantages arises from the fact that the working miner frequently lives at a distance of two, three, or four miles from the mine. This distance he has to walk before he commences his eight hours' labour, and to return the same distance when he has completed that labour. Again, the "e" is the descent of the almost perpendicular ladders which lead to the different parts of the mine. In many cases the miner has to work at depths of from 200 to 250 fathoms, from 120 to 1800 ft. below the surface; and there are mines in which, according to the report of the Royal Commissioners on Mining, not less than three hours are expended by the miner in going to and returning from his work.

Few people not immediately connected with mining can have any conception of the vast lengths of excavation in large mines which have to be daily traversed by the miners. When the now celebrated Devon Great Consols had been at work only five years there were in it nearly seven miles of excavation; and in the Consolidated Mines, which for so many years held a prominent position among Cornish mines, it was estimated that during a period of 20 years 37,330 fathoms had been driven horizontally, and about 18,000 fms. sunk in winzes and shafts, making a total of nearly 63 miles.

The fatigue undergone in making the ascents and descents, coupled with the walk of three or four miles to and from the miner's cottage to the mine in all weathers, is certain slowly, but not the less surely, to undermine the constitution of the miner. Few of the ladders used in the mines are very much inclined, and some are even perpendicular. It will easily be seen, then, that the climbing of such steep ascents must of necessity tend to increase the action of the heart, and that a considerable degree of exhaustion is naturally the effect.

All this is so much work, so much vital energy, extracted from the living machine, and expended upon waste or unprofitable labour. So universally has this been felt and acknowledged, that it is always estimated by mine agents to be of the value of from one-fourth to two-fifths of the work capable of being performed by an able-bodied miner.

Yet, excepting in those comparatively few mines where the man-engine is employed, or in which the inclined shaft is used, both mine agents and mine adventurers, as a body, have feared to grapple with these difficulties; indeed, as yet, they have scarcely thought with boldness and spirit of any means of surmounting them.

In our coal mines men and agents are lowered to the bottom of the deepest mine in five minutes; once arrived there the scene of labour is within a short distance of the bottom of the shaft. Inspection of the entire mine is the work of a few hours only, and as to the active labourer, the coal-cutter, he knows the exact work he has to accomplish to a hundredweight, and it is useless to shirk it until the full tale is completed. Surely, something can yet be done to lessen the expenditure of money, and of that which is more valuable than money, vital energy, in Cornish mining.

Another disadvantage in Cornish mines, which is gradually being removed, is imperfect ventilation. As mines have been extended, and the shafts, crosscuts, winzes, &c., have been increased in number and dimensions, thus allowing free circulation of air in the mines, this difficulty has to some extent been lessened.

Still, the deficient amount of oxygen, and the presence of carbonic acid gas in the air of mines, has been the cause of much ill health. In very few mines is the air in a normal state, or even nearly so; in the majority it is exceedingly bad.

The smoke of the gunpowder used in blasting, the dust, and gritty particles arising in the course of excavation, the consumption of oxygen by the burning candles, the height of the temperature on account of the great depth of the mines, and the subsequent exposure to the cold air at the surface, all add their proportion of positive injury to health. What is wanted is that improved methods of artificial ventilation should be adopted, as in the coal mines, where, from the still greater impurity of the air, the subject of ventilation has received the best attention.

A system of ventilation that should secure both the health and comfort of the Cornish miners, and not be impracticable from its great cost, would be one of the greatest benefits that could be bestowed upon the county of Cornwall.

The discussion of the foregoing questions leads us to notice briefly the mortality among Cornish miners. The periodical returns of the Registrar-General fully bear us out in saying that, as a rule, the average health and duration of the Cornish miner are below that of any other labourer in England. In the prime of life, when, by their experience, combined with the confirmed strength of that age, they would be of the greatest value, they rapidly become enfeebled, and the weakness of old age and unhealthiness are the ill ventilation and the labour of ascent and descent noted above, the early age at which boys are sent to work underground, and the exposure to cold and damp at the surface when heated and exhausted by the climbing of ladders.

During the last dozen years the mortality of miners has slightly decreased, but still the facts are of a nature greatly to be deplored. The average mortality of miners between 45 and 55 years, and between 65 and 75 years, is about twice as great as the mortality at the same ages among other males, exclusive of miners

while the mortality of miners between 55 and 65 years is three times as great as that of other males between those ages, and is two and a half, as great as that among the northern coal miners. The chief diseases of which miners die are of a pulmonary character, and between 55 and 65 years eight times as many miners die from such diseases as of non-mining males. But this last fact must not be taken at its full extent, as undoubtedly many miners, on account of the peculiarities of their calling, die of pulmonary diseases who in other occupations would have been subjects of other complaints. From these few statements it will be seen that it is at no small sacrifice of health and life that the mining operations of Cornwall are carried on.—*Western Morning News*.

Royal School of Mines.

ROYAL SCHOOL OF MINES,
JERMYN STREET, LONDON.

DR. FRANKLAND, F.R.S., will COMMENCE A COURSE OF FORTY LECTURES ON INORGANIC CHEMISTRY on MONDAY next, October 8, at Ten o'clock, to be continued on each succeeding Wednesday, Friday, and Monday, at the same hour. These Lectures will be delivered at the Royal College of Chemistry, Oxford-street. Fee for the course, £1.

TRENTHAM REEKS, Registrar.

GREAT EAST CLIFFORD AMALGAMATED MINING COMPANY (LIMITED).

In 2000 shares of £10 each; £5 on application, £5 on allotment, when all liability ceases.

BANKERS.

National Provincial Bank of England, Bishopsgate-street, London.

Messrs. Willyams, and Co., Truro, Cornwall.

SECRETARY.—Mr. Thomas Eaves.

FINANCIAL AGENTS AND SHAREBROKERS.—Messrs. R. C. Clifton and Co., Aldine Chambers, Manchester.

REGISTERED OFFICES.—61, PRINCESS STREET, MANCHESTER.

ABRIDGED PROSPECTUS.

This company is formed for the purpose of working an extensive and valuable piece of rich mineral ground, situated in the parish of Gwennap, in the county of Cornwall, immediately adjoining the celebrated Clifford Amalgamated Mines, which have yielded vast quantities of copper, and have already paid upwards of £2,000,000 in dividends.

The Gwennap mining district, for its extent, is well known to be the richest mineral district in the world; it is only necessary to refer to the following—namely, the United Mines having returned £2,000,000 sterling; Wheal Jewel, £450,000; Poldice, £200,000; Wheal Clifford, celebrated for her hot ledges and riches, and other productive mines. Tresavean, which returned £154,422 upon an outlay of £50 per share, gave each shareholder a profit of £1500; and Penstritha, £130,000 in dividends, &c.

The ledges of many of these extraordinary mines are parallel to and embedded in the same stratification as the Great East Clifford Amalgamated Mines, so that the successful development of this property is, therefore, a matter of apparent certainty, from its analogy to its rich neighbours, it being merely a matter of sinking to the depth at which the riches in the above mines have always been found to exist.

The stratum is composed of soft light blue killas, and two large elvan courses intersect all the ledges passing through the sett.

The directors refer with confidence to the reports of the mine from the most eminent mining authorities, which are well deserving of a careful perusal.

The important feature in the formation of this company are, that there is no promotion money, and the liability of the shareholders does not extend beyond the payment on the allotment of shares, which relieves the shareholders from the annoyance of having repeated calls made upon them.

It is estimated that a dividend of at least 20 per cent. will be declared within twelve months; and in order to testify the vendor's confidence, he has agreed to guarantee a minimum dividend of 10 per cent. for two years.

At the first general meeting of the company it is proposed to give the shareholders the option of electing one or more of their number to represent them on the board of directors.

Application for shares to be addressed to the Secretary, or to Messrs. R. C. Clifton and Co., from whom prospectuses, reports, and all particulars can be obtained.

R. C. CLIFTON and Co. invite subscriptions to this undertaking, believing that it will become the greatest mining enterprise in the Kingdom, the adjacent mines having returned upwards of £10,000,000 sterling in dividends.

Early application for shares is necessary, as the directors reserve to themselves the power of closing the list without giving any notice.

THE LEVANT UNITED MINES,
ST. JUST, NEAR PENZANCE, CORNWALL.

In 6000 shares of £5 each, on which 10*s.* has been paid.

BANKERS.

In London—Messrs. Roberts, Lubbock, and Co.

In Penzance and St. Just—Messrs. Batten, Carne, and Carne.

OFFICES.—139, LEADENHALL STREET, CITY.

The Committee of the Levant United Mining Company having received applications for 5100 shares hereby give notice that NO APPLICATIONS FOR THE REMAINING SHARES will be RECEIVED for the LONDON DISTRICTS after the 22d, and for the COUNTRY after the 24th October.

Dated 27th Sept., 1866.

By order, GEORGE CARNE, Manager.

THE GLYN RHONWY SLATE COMPANY (LIMITED),
LLANBERIS, CARNARVON.

Nominal capital £50,000 in £5000 shares of £10 each, 2000 of which have been issued, and £20,000 thereon fully paid-up.

Present issue of shares 1500, being half the remaining capital.

Deposit £1 on application, and £2 on allotment.

Calls not to exceed £2 per share, at intervals of not less than three months.

The quarries held by this company are situated on the south side of the Lake of Llanberis, and have been so far developed during the last five years as to leave no doubt of the complete success of the undertaking.

The slate produced is very superior in quality, and the demand greatly exceeds the supply. The very limited capital of £20,000 only has been expended on the works, yet the profits last year were upwards of £2000.

The present yield is about 400 tons a month, of the value of £2 6*s.* ad. per ton, and the sales for twelve months to March 31, 1866, amounted to £6688, as compared with £3698 in the year to March 31, 1862.

The Carnarvon and Llanberis Railway (now in the course of formation) runs through the slate-yard of the company, and will effect a great saving of expense—about £700 a year on the present make—and will otherwise add to the great advantages which these quarries possess.

Part of the quarries are free from royalty of 2*s.* a ton, equal to about 1/23d of the selling price.

The time has now arrived when a judicious expenditure of £15,000, in erecting slate machinery and further extending the works, will unquestionably return very ample profits, the increased value of slate being estimated on reliable authority at from 10*s.* to 12*s.* a ton a month, which, at the very moderate profit of 1*s.* per ton, will yield a dividend of from 25 to 30 per cent. on a capital of £35,000, with progressive further increase.

The directors have determined upon a present issue of 1500 shares only, and the allotment will take place on the 8th of November, previously to which applications for shares must be made.

Prospectuses, with full details, and forms of application for shares may be had of the acting secretary, at the office of the company, 27, Bucklersbury, London; at the quay office of the company, Carnarvon; or from W. W. CRAGG, Esq., manager and director at the quarries, who will afford any further information that may be required.

J. BEDDOW, Acting Secretary.

NICKEL AND COBALT REFINING, AND GERMAN SILVER WORKS, 16, OÖZELL STREET NORTH, BIRMINGHAM.

STEPHEN BARKER begs to inform the Trade that he has the following articles for sale:—REFINED METALLIC NICKEL.

REFINED METALLIC BISMUTH.

OXIDE OF COBALT.

GERMAN SILVER—

should pay only the minimum dues then existing in the communes before being annexed. The seven years has now nearly expired, and it is rumoured that after Dec. 31 next the City of Paris intends to levy the 7 frs. 20 c. per ton indiscriminately; which, in the case of some works, will be equivalent to a surcharge of 4000/- per annum; but the hope is expressed that this intention will not be carried out. It is remarked that there are two means of changing the transitory state of affairs now existing—by including both the city and the suburbs, or, as suggested by the *Journal des Débats*, abolishing the impost altogether. Mr. Durant favours the latter course, and argues that Paris is a manufacturing city, and that, therefore, the argument that it should be continued, because “to exempt coal would be to favour the development of great industrial establishments in Paris which should be a city of luxury—the metropolis of arts and civilisation,” is not tenable. The suppression of the octroi upon coal at Paris would not, he contends, relieve Parisian industry alone, since smaller towns, which have imitated Paris in levying it, would, probably, follow the example set in its abolition.

FOREIGN MINING AND METALLURGY.

Although a slight revival has appeared in current prices in Belgium, the general position of metallurgy does not improve. For some time past no important contract has been concluded. In presence of this continued paralysis in affairs, industrials are not without uneasiness. The blast-furnaces have a considerable stock, which has, nevertheless, been diminished by some sales of casting and refining pig, but at not very remunerative prices. Several transactions in pig-iron have been concluded in the Liège, Charleroi, and Centre basins at the rate of 32s. 6d. per ton, delivered at the works. This price does not indicate any of an early improvement in the position of the blast-furnaces, especially in the presence of the continual advance in coal; it is, consequently, expected that several of them will be extinguished before long. M. Edouard Parmentier, of Houding, has undertaken an important contract for pipes required in connection with the water supply of Paris. The rolling-mills producing plates have received some orders, especially for France. It is stated that MM. Débré and Vialon, engineers, intend to establish a new rolling-mill at Jupille, in connection with plates of commerce. In the Liège basin the rolling-mills are generally tolerably well provided with orders for ordinary irons and plates, but, as in the Charleroi basin, continue high. The foundry of MM. Dagnelles, &c., in the Charleroi basin, continues high. The foundry of MM. Dagnelles and Higuet, at Châtelineau, has been purchased by the Société des Forges et Ateliers de la Platine, at Bouillon. The construction workshops are for the most part pretty well employed, but the want of labour is a source of inconvenience and depression for this industry as well as for others, and several companies are greatly embarrassed to complete within the periods prescribed by the *contrat des charges* the deliveries undertaken on account of the State. The foundation is spoken of in the Charleroi basin of a new establishment for the construction of locomotives. Complaints are still made of the want of plant on the State and other lines. The demand for coal continues very active in Belgium, but the production is very restricted; it is hoped, however, that more mines will soon return to the pits. In the Charleroi basin many transactions have been concluded at an advance, but it would be difficult to indicate prices with precision, as they have varied greatly. The deliveries by railway are very active, especially for France. In the Liège basin the improvement in the state of the public health has brought many men already back to their work, but the demand is so considerable that prices are maintained at an advance with great difficulty. Producers refuse to engage in contracts of long duration, and only enter upon affairs for short terms, and at very firmly maintained rates. Coke is much sought after, and is very scarce. In the Centre the demand continues abundant, and stocks are without importance. In the Mons basin wages are very high, and seem likely to advance still further; labour makes default, while miners follow each other with great activity, and the deliveries made are very numerous. Fine forging coal has made 13s. 6d. per ton on trucks; washed coke, 15s. 2s. 6d.; and unwashed, 16s. per ton. The United Proprietors Collieries Company has just held its annual general meeting. Notwithstanding difficulties experienced during the exercise terminating June 20—a scarcity of workmen, a rise in wages, an extraordinary influx of waters at St. Pierre, and repairs rendered indispensables at the Providence pit—the results of the year were satisfactory, since the profits realised enabled a dividend to be distributed at the rate of 7 per cent. per annum, or 11s. 8d. per share: the previous year had produced only 4 per cent. The quantity of coal produced in the Providence pit during the year was 319,000 hectarolites, and in the St. Pierre pit 184,036 hectarolites. The product of the extraction at the Providence pit was 15,383t., and the total cost of the extraction having been 11,476t., the profit realised was 3907t. The product of the extraction at the St. Pierre pit was 9829t., and the total cost of the extraction having been 7267t., the profit realised was 2562t. After making various deductions for redemptions, &c., the total profit realised was 4720t. In order not to interrupt the regular working of the company, nor to burthen its financial position, the dividend will be distributed as follows:—16s. per share will be paid January 1, 1867, and 12s. per share, at a period to be subsequently determined.

The Hayre copper market has remained a quiet lot of 10 tons of Chilian in bars, to be delivered at the end of the month, at 80/- per ton, Paris conditions. During the last fortnight affairs have been nearly still on the Paris market: English is quoted by continuation at 87/-, Chilian at 91/-, and Corcozo mineral at 84/-, 10s. per ton. The situation of the German markets is tolerably satisfactory, and it is remarked that at Hamburg purchasers appear more disposed to accept the new rates. At Berlin and Cologne quotations have been sustained without change. At Rotterdam, Drontheim has been quoted at 63/-, and Swedish at 61s. The Amsterdam and Rotterdam tin markets have displayed little activity. The transactions concluded at Rotterdam comprise 800 blocks of Banca, at 46s. 6d., and 500 to 600 blocks in several lots, at 46s. to 46s. 6d. The annexed table shows the sales of Banca tin at Amsterdam and Rotterdam during the last 30 years:—

Rotterdam.

Soc. of Com.	Private Individuals.	Soc. of Com.	Private Individuals.
Ingots.	Ingots.	Ingots.	Ingots.
1837	16,664	2,140	13,505
1838	6,318	2,345	6,098
1839	32,507	4,127	33,115
1840	25,816	2,451	23,622
1841	34,649	3,293	23,231
1842	43,350	526	34,949
1843	50,217	4,114	45,222
1844	21,675	750	20,972
1845	47,773	658	36,028
1846	39,161	3,630	29,929
1847	70,273	49,682	—
1848	58,477	40,198	1,958
1849	106,705	83,322	—
1850	67,710	50,056	—
1851	60,396	50,875	—
1852	85,759	70,943	—
1853	62,178	69,134	—
1854	65,728	67,136	—
1855	85,491	48,949	—
1856	86,817	80,565	—
1857	119,571	70,988	—
1858	106,281	84,561	—
1859	68,805	70,235	—
1860	71,499	80,014	—
1861	73,973	75,215	—
1862	77,722	77,471	—
1863	59,718	59,374	—
1864	62,701	84,220	—
1865	83,129	86,807	—
1866	44,359	67,387	—

The total sales in each year and the highest and lowest prices current were as follows: Sales, Lowest, Highest, Sales, Lowest, Highest, Sales, Lowest, Highest, Sales, Lowest, Highest, Year, Ingots, fl., Year, Ingots, fl., Year, Ingots, fl., Year, Ingots, fl.,

1827 45,772 44 1852 156,702 51 73 1/4
1828 32,603 46 1853 122,312 71 79
1829 77,194 43 1854 135,443 65 79
1830 56,229 43 1855 134,430 62 76 1/4
1831 61,319 44 1856 167,382 72 94
1832 80,281 39 1857 199,559 56 89
1833 101,503 44 1858 199,842 63 78
1834 57,288 40 1/2 1859 142,028 76 87
1835 89,083 40 1/2 1860 154,381 77 92 1/2
1836 60,825 52 1861 149,188 60 1/2 78
1837 111,955 45 1/2 1862 155,193 60 1/2 80
1838 106,165 50 1863 119,092 67 1/2 80
1839 249,937 40 1864 146,921 56 73
1840 117,700 41 1/2 1865 169,927 54 69
1841 111,181 42 1866 111,746 44 1/2 59

Afairs in tin have presented little activity at Hamburg. The Cologne market has displayed little animation, and prices have remained without change. Lead has sustained itself well at Hamburg, in consequence of the extremely limited supplies. On the Amsterdam and Rotterdam markets lead gives rise to only transactions of small importance, which have taken place simply with the view of meeting the requirements of local consumption. The Cologne and Stettin markets present scarcely any change. Zinc has been somewhat firmer at Hamburg. The Breslau market has continued quiet; the tone of the market appears, however, to be improving. At Cologne there is no change to note in zinc, affairs are more regular, but they have not attained the degree of activity which they might be expected to present when compared with other metals; on the other hand, the season is far advanced, and consumption does not give rise to any very great affairs. There has been little business of late in zinc at Paris, and prices are almost nominal; rough Silesian has made 217. 16s. per ton.

With the exception of a temporary check in the production of certain works, occasioned by the state of the waters, there is no very striking fact to notice in the state of the French iron trade. Transactions, without being very numerous, are, nevertheless, very actively maintained. A contract for charcoal-made pig has been concluded at St. Dié, at 32s. 10d. per ton delivered. A transaction in coke-made pig has also been concluded, at 32s. per ton, delivered at Euville; the price of iron has been firm, without change. The groups of the Meurthe and the Moselle are tolerably well provided with orders for pig. The Novéant works have concluded a contract for 4000 tons of pig, at 32s. per ton, at the works. Another contract has been concluded at the same rate for 500 tons, and other orders are still in course of negotiation. On the whole, prices are well maintained, and the works are well provided with orders. Conduit pipes are in demand at 61s. 8s. to 61. 12s. per ton;

one order has been concluded at 61. 8s. to 61. 10s. per ton for gas conduit pipes of all dimensions. In heavy castings, solid columns are quoted at 41. 16s. to 51. 4s., and hollow columns at 61. 12s. to 71. per ton. Pig for casting purposes has been less sought after; it is quoted at 41. 4s. per ton for No. 1, 41. for No. 2, and 31. 12s. to 31. 16s. per ton for No. 3. Iron remains firm, at 8s. to 81. 16s. per ton at the works; the production is very restricted in consequence of the want of workmen, whom the state of the public health keeps aloof from the works. The discovery is reported to have taken place of beds of coal in the Moselle, but the announcement is made subject to great reservations. Should the reported discovery be confirmed, the industry of the Moselle will find a new and certain source of profit and great facility in production; but at present it is apprehended that industrials have taken their desires for the reality. The mechanical concern known as J. F. Call and Co. has just held its ordinary annual general meeting at Paris. Special interest was attached to the gathering in consequence of the destruction by fire in the course of the past exercise of the Paris establishment of the company. The loss then sustained amounted to 80,000/-, but it was reduced by the insurance paid to about 8000/-, while the operations on hand were resumed with little loss of time in the Grenelle workshops, which are now in full activity, and in which it is proposed to concentrate nearly all the operations of the company. The business of the company increased in 1865-6 to an extent at least equal to the progress realised in former years. The Denain establishment proved less beneficial to the company than hitherto, but it still yielded a profit. As regards the principal establishment at Paris, the results attained exceeded the hopes formed, the profits accruing from it amounting to nearly 72,000/-, while already for the current exercise there are orders on hand to the amount of more than 240,000/-; a great contract is also being pursued with Russia, from which large profits are expected to be realised. Notwithstanding the loss sustained by the fire, the dividend for the past exercise has been fixed at 31. 12s. per 20/- share, or 18 per cent. on the paid-up capital. For the previous exercise the dividend distributed was only at the rate of 16 per cent. per annum. Of the 31. 12s. forming the dividend for 1865-6, 17. per share became payable on Oct. 1, and the balance of 21. 12s. per share will be paid on and after April 1, 1867—11. 12s. in specie, and 16. in a bond of liquidation bearing interest at the rate of 5 per cent. per annum.

HINTS TO EMIGRANTS—NO. III.

BY CHARLES S. RICHARDSON.

I closed the last chapter with showing that reports, *pro et con*, on the labour question are not always reliable. I will now imagine you to say that you have heard all these things before, but never believed them; that you are a hard-working man, and always expect to work, for poor people must work hard go where they will; but you have a large family, and with all your toil can scarcely make ends meet; and as things look now you cannot see that your children, when they grow up, will fare any better than you do. You want to emigrate, so that by an extended sphere of labour, where prices are higher, you may save enough money to get a house of your own over your head, and a small plot of ground to help maintain you and the “old woman” when you get old, and not able to work so hard; that you want to see all your boys and girls around you doing well, which you are assured they would do if they once had a fair start. Now, my friend, you are the very man to come to America; it is such as you the Government of this country want: it is the real settlers, and especially those who have large families, that are most required here; and if emigration agents were to act wisely they would encourage and assist such men as you; but, unfortunately, many of them look more to numbers than to quality, and this is the reason why there are so many thousands found loitering about the large cities. They start with no definite object in view, many of them caring for none: it is with them “live to-day, and let the morrow care for itself.” This portion of the foreign element are aptly called the “floating population.” Many of them are dissolute, idle, and dishonest, and not only do they become a nuisance to the industrious classes, but an absolute burden to the whole community.

Now, to give you encouragement, I will say that in several of the States there is not only hope of your attaining your desires, but at this time many opportunities of realising them in a reasonable period; but you must calculate on certain drawbacks, for not only will you have a good deal of hard work to perform, but will meet with many petty annoyances, and the deprivation of innumerable little comforts which you have been accustomed to from your boyhood. In fact, it is the inferior foreigners feel in this country the most irksome. I will suppose, for example, that you are a mechanic or farm-labourer, have lived in a country town or village, and that although you are a temporary man, yet have been accustomed to enjoy the luxury of your “plow and pipe”; with your fellow shopmates or labourers at the village inn on the Saturday night; that you have looked forward with joyful anticipations (as I have done often) to the time when you will meet your associates, friends, neighbours, sweethearts, and wives at the holiday merrymakings, the country fair, the club-meets, the cricket matches, the races, the harvest home, and other convivial sports and pastimes country-folks have from time immemorial been accustomed periodically to resort to. They are in themselves innocent recreations and necessary aids to the enjoyment of leisure hours, or at such times as you can obtain a cessation from your daily toil; but when they are indulged in to excess (as I have known hundreds of cases to have been at home), they have become the “bane of the workman’s wealth,” and a prolific source of pauperism. Now, most of these little socialities you must make up your mind to dispense with, for in the new position I am about to introduce you to you will find them not. Nevertheless, if you are what is called a religious man, perchance you may find occasional recreation at the camp meetings, love feasts, prayer meetings, revivals, teetotal gatherings, dippings, protracted meetings, &c., some of which are held yearly in all country districts. The Americans are not generally a drinking people, but are very fond of political and religious assemblies, especially in the North. My advice, however, to all new comers is to keep clear of both.

Now, first ascertain, if possible, before leaving home where you are going to. When you land in New York do not stop more than one day, but go off direct to your destination, or the nearest town to it. The city is full of snare and temptation, besides being very expensive. If you have, through an agent, already purchased property, he ought to direct and assist you in reaching it. If you have not done so, I should advise you not to do so now. Agents are not all honest men, however great a show they may make in their city offices; and unless you have a respectable English reference you are very likely to be deceived, either in the value of the land, its location, or title; and in some instances, still worse than either, the land you are supposed to have bought may turn out to be all “bogus.” I will give you an example. A few years ago there appeared in the window of an office in Manchester a beautifully drawn map of a large estate in Virginia; it looked on paper like a nobleman’s park, with gently sloping lawns, ornamental waters, cascades, and brooks, with smooth carriage drives, gracefully curved, running in and out through detached groups and groves of beautiful trees. In other places fine farmhouses, surrounded by fields of waving corn, and luxuriant meadows. The description represented the whole as rich agricultural land, and was for sale, in lots of any size to suit the convenience of purchasers, at the low sum of 17. per acre. By the payment of 5s. per acre the purchaser was to be paid a deposit of a dead of the land; the remainder of the purchase money was to be paid by instalments after occupation. Quite a number of persons purchased these lands, and came to this country, some bringing their families and all they possessed with them. They were, moreover, told that the transport cost from New York to the place would only be so much: but in this they were grossly deceived, to begin with, for by the time they arrived at Charleston, in Kanawha—the point of debarkation—all their little stock of money was expended, and they were in great distress, having to sell many of their goods to raise money to live with. They now found there was no agent here to represent the Manchester vendors, and when they asked the people about their land no one could be found to tell them where it could be found, but afterwards found the land was claimed by persons living in the district. One of them informed me that the Manchester men did own some land in the country, for he had, after many days of weary travel in the back woods of Boone county and Logan, succeeded in finding it; but fancy his surprise and indignation when, instead of fine sloping grassy lawns, silvery streams meandering through fertile flowery valleys, and gently undulating grounds, with sunny hill sides, as represented on the Manchester map, it was all one dense dark forest, the surface broken by a succession of narrow rocky ravines and precipitous saddle-back ridges, without roads in or out, and far away from any line of thoroughfare. Now, this man’s description was a correct one of the country at that day, for I know the district well, having during the past few years made surveys of many thousands of acres of it. It is, however, now settled on in such places where the valleys are wide enough to admit of farming; but 15 years ago it was a complete wilderness, and the part sold to the emigrants was the very worst part, below the back hills and ridges, never worth more than 2s. 2d. per acre, and for agricultural purposes very dear at this price. Of course, the emigrants paid no more money, and those who had found the land threw it up as a bad bargain, for they soon discovered the whole concern was a complete swindle.

You will now wish to know what became of the poor men who had been so bitten by these rascally “land sharks.” Well, I may say that most of them are now respectable residents in Kentucky. They have accumulated considerable property, and are now what we call “well to do in the world.” There were a few, but very few, who became profligate; these are no better off to-day, or scarcely so well, as when they left England. In the south-western States, before the late war, there were greater inducements to intemperance than at the present time. Common whiskey was only 3s. per gallon. Many who were fond of strong drinks became habitual drunkards. I know of some shocking cases, indigence and destitution, always produce idleness, and very often result in crime. This “strychnine rime whiskey,” as it is sometimes called, is now 17. 4s. 6d. per gallon, and it is as many pounds as it is shillings so much the better would it be for many working men, for then wholesome malt liquor would supply the place of this vile poison, and I, for one, do sincerely hope the present Government tax on ardent spirits (oppressive as some say it is) will be maintained, and if any change is made that it may be increased.

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SODIUM AMALGAM IN AUSTRALIA.—Referring to the advantages of the use of sodium amalgam in the treatment of gold, Mr. W. SHIRESS, of the Bank of New South Wales, who is well known as an analytical chemist, writes: “Owing to its very powerful

sheets, and hoops. At Milton and Elsecar all is quiet, and business brisk; but as the month which the men agreed to work the patent furnaces at the former place will shortly expire, it is not unlikely that there will be a renewal of the disagreement. Mr. George Dawes, however, is having the old furnaces converted to the new principle, and orders have been received from several of our largest iron-works, so that they are slowly but surely making their way in the trade. There is considerable activity at the works on the Lincolnshire side of the Trent, there being plenty of orders on hand at all the works. Several of the furnaces, however, are not in blast, but under repair. From the same locality a large quantity of ironstone is being exported into Yorkshire and Derbyshire. The enquiry for coal from the South Yorkshire district continues good, and at some of the Silkstone collieries the orders in hand are in excess of the means of supply. A large business is done with the metropolis and the markets in the South, the returns for the last month showing that there entered London by railway 12,620 tons of Silkstone and 12,340 tons from the Barnsley bed. Engine fuel and slack is in moderate request for the works in Lancashire, and a good deal of the small is being manufactured into coke. Business for the North of Europe is being actively pushed forward, and a large tonnage is being forwarded to Hull and Grimsby, masters being desirous of pushing the trade as much as possible, in anticipation of the speedy closing of the Baltic. There is a fair enquiry for coke, but a good number of ovens are out, so that what is made finds a ready market. For the last two or three days one of the collieries near Barnsley has been idle, owing to some necessary repairs being done to the canal at a point where on several occasions during the last three or four months it has burst, causing considerable loss to masters and men. It appears that the coal in the immediate vicinity of the canal has been got too close to it, hence the frequent bursting.

On Tuesday evening a very interesting meeting was held in the Town Hall, Leeds, to celebrate the first year of the establishment of the firm of Henry Briggs, Son, and Co. (Limited), of the Whitwood and Methley Junction Collieries. The company started under a somewhat new principle, it having been arranged that the workmen should be participants in the success of the undertaking. For that purpose it was agreed that the dividend to be paid to the shareholders should be fixed at 10 per cent., and when the profits exceeded that amount the surplus was to be divided between the company and the workmen, the latter being paid a percentage on the earnings of the year. The operations of the company during the year have been highly successful, and whilst the shareholders received a dividend of 12 per cent., the workmen had bonuses presented to them varying in amount from £1 to £10. In the course of the evening, Joseph Pyrah, a working collier, read an address to Mr. Currie Briggs, the managing director of the works, for the kindness shown by him to the workmen, and for the liberality with which they had been treated by the company. In concluding the address, which was a very able and interesting one, Mr. Pyrah requested Mr. C. Briggs to accept of a very handsome silver ewer, as a token of their admiration of his many virtues as a gentleman and an employer. Mr. Briggs, in acknowledging the compliment, stated that he had been taken by surprise, as he had received no intimation whatever of the intended testimonial. Amongst the speakers were Prof. Fawcett, M.P., Thomas Hughes, M.P., &c.

An inquest was held on Monday, at the Crown Inn, Staveley, on the body of Thomas Baldwin, who had died on the previous Thursday from injuries received whilst at work at the New Hollingwood pit. A deputy, named Abraham Waiters, said the deceased was a burly man, and had been warned that the mass of coal and coal, which afterwards caused his death, was dangerous. Deceased, however, sounded in with his pick, and pronounced it all right, soon after which he sounded the last sprig which supported the coal. This he carelessly did with his hands, instead of removing it by means of his pick, or by throwing another sprig at it, as is usually done, and before he could get out of the way about 12 cwt. of coal fell on him, and he died the same night. The inquest also extended to the body of William Barrowcliffe, who met with his death under similar circumstances, a much greater amount of coal having fallen on the man, and death was instantaneous. In both cases the jury returned a verdict of "Accidental Death."

On Tuesday an accident, which terminated fatally, occurred to W. Turner of the Birley Vale Colliery. The corves were being pulled up the drift by the engine, when one of them caught one of the supports and pulled it down. A quantity of wind was consequently let loose, and, falling upon him, injured him fatally. He was extricated and removed home, where he died in two hours. He has left a wife and three children.

THE SO-CALLED LOWER NEW RED SANDSTONE OF PLUMPTON, YORKSHIRE.—Mr. E. W. Binney, F.G.S., referring to a statement in Sir R. Murchison's paper "On the vast area in England and Wales in which Productive Coal Beds can reasonably be looked for," read at the recent British Association meeting at Nottingham, writes:—"It is not my intention at present to discuss the point as to whether profitable coal measures ever covered the millstone grits of Yorkshire, but I do desire even to so great an authority as Sir Roderick, founder of the Kingdom of *Permia*, as well as *Siluria*, claiming the Plumpton rocks and conglomerates as forming the base of the Permian system, and thus a portion of his first-named realm. These rocks I have shown were most probably upper millstone grit, or 'rough rock.' Since that time I have been confirmed in my opinion by local geologists, so that I have now no doubts upon the matter. The same reasoning which proves that the magnesian limestone, forming the base of the Permian system, reposes directly on unproductive millstone grit from Barnard Castle to Harrogate, shows exactly a like sequence of rocks through Knaresborough, Plumpton, and Bramham Park, the only difference being that the coarse millstone at Plumpton is coloured red by peroxide of iron, certainly no sufficient reason, in my judgment, for claiming it as Permian. I should not have troubled you with this letter had not I deemed it right to lose no time in warning people from searching for coal in the millstone grit of Plumpton, which is not a locality where there is any fair probability of finding a profitable seam of coal, but a place where no productive coal beds can reasonably be looked for."

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

OCT. 4.—There is no improvement to be reported in the state of the Iron Trade in either part of Staffordshire. The orders continue small, and the works are only partially employed, and this in the face of the stoppage of the works in the Cleveland district. If, as from some accounts seems likely, the men there should give way, and the works be re-opened, there would be a still further scarcity of orders in this county, unless trade should take a turn for the better. As yet the reduced rate of money has not done anything for the Staffordshire iron trade. The returns for the last month show a falling off in the exports of iron and steel, compared with the corresponding period of last year, and those for the present month are likely to present a still greater reduction. The Hardware Trades show a degree of improvement in some branches. The demand for railway work is better, but in many departments the manufacturers have great difficulty to keep their men employed.

The quarterly meeting of the North Staffordshire Iron and Coal-masters' Association was held to-day, at Stoke-upon-Trent. Mr. Wragge, agent for Earl Granville, presiding. No change was made in the price of iron, and the general accounts concurred in representing the trade as quiet, and the works not fully employed. The pig-iron trade was consequently quiet, but there were no large stocks. No change was made in the prices of ironstone for the ensuing quarter.

Mr. Kane, the secretary of the Ironworkers' Association in the North of England, in his reply to Mr. Jones, the secretary of the Ironmasters' Association, raises an important question as to the extent to which Arbitration is available in the settlement of trade disputes. The men there offered to submit the question of wages to arbitration, the masters to appoint three and the men three. Now, the question at once arises what course would these six persons have taken if they had been appointed? What standard or principle would they have appealed to? In a trial an issue is raised, and principles of law, acknowledged on both sides, are to be applied to the actual facts. The jury ascertain the facts and the judge applies the law; or in case of an arbitration, the arbitrator does both. But as to this question, "Shall wages be reduced or not?" there is, it is to be feared, no recognised basis of agreement which both sides would acknowledge. If it were a question of fact, as, for instance, "Is iron selling in the market 10 per cent. lower than when the existing scale of wages was fixed?" arbitrators might decide it; but a question "all at sea," with no recognised definite standard, can only be determined by the votes of the parties; and it is to be feared that there would be three to three, and the chance of agreeing upon an umpire would be as slight as it would to find one who would undertake the task in an impartial spirit. It would be far more satisfactory to show that arbitration would settle such disputes; but until some basis is acknowledged it appears inapplicable to the question. Mr. Kane does, in an indefinite manner, raise the question whether the price of iron is actually lower, and says, "Why is it that the organs of the ironmasters speak of the improvement of the iron trade and the beneficial effect that is produced by the declaration of peace on the Continent, and the reduction of the rate of discount to 5 per cent.?" Mr. Kane can hardly have read any such statement in any organ. It is true that before these events it was hoped they would give an impetus to the trade; but except partially in South Wales, where wages are lower, no actual improvement has been experienced or

reported, and the fact that, with the Northern ironworks standing, Staffordshire is very short of orders is a convincing proof how depressed the trade is.

At the dinner noticed in the *Mining Journal* last week to celebrate the success of sinking for coal at the Stafford Pits, Prior's Lee, Mr. Jones, the engineer, gave an interesting account of the progress of the work. It commenced in November, 1862; gas and water, in a few months, had to be vigorously dealt with, but by means of more powerful machinery and special appliances, they were able to grapple successfully with these two great foes to the miner. Soon afterwards, however, they encountered pebble rock, so hard that they scarcely got through half a yard a month. Lower down, when they were mastering the water, the engineman struck, and the water gained on them, and three months' delay occurred. At a depth of 200 yards they were full of despondency, but at 205 yards they struck the three-quarter coal, and other seams immediately afterwards. The success of this adventure is of great importance, as it encourages the belief of those who are of opinion that coal may be got over the whole district between North Staffordshire, South Staffordshire, and Shropshire, if not as far as the estuary of the Severn.

At the Walsall Police Court, this morning, David Jeavons, manager of the mines of the Bloxwich Colliery Company (Limited), was charged, on the information of Mr. Baker, Government Inspector, with having, on June 30, neglected to duly provide for the ventilation of a pit under his care, and also with neglecting to have it examined before the men commenced work. The men began work without any examination, and in five minutes after they commenced there was an explosion, by which one man was killed. An attempt was made to show that the son of the deceased was acting as doggy, and was, therefore, responsible; but this entirely failed, he being merely employed to look after the horse-drivers, as the doggy, who was ill at the time, said "to wees about the ways a bit." With the concurrence of the prosecution, a nominal fine of 5s. and costs was imposed in the first case, and of 5s. in the second.

REPORT FROM MONMOUTH AND SOUTH WALES.

OCT. 4.—As anticipated in last week's report, the ironmasters, at their Preliminary Meeting, decided upon adhering to the old list prices. In the face of the present rate of wages, and the cost of production, no other result could have been arrived at, if makers are to get any remuneration at all; indeed, if present prices are compared with those obtained three years ago, it will be found there is scarcely any difference, whilst labour and the cost of production have advanced at least 10 per cent. No doubt, now the prices are fixed, and money has become still cheaper, with public securities more negotiable, home consumers will venture into the market with some of the orders that have been so long a time held back. The trade of this district is characterised with a larger amount of confidence than for some time, induced doubtless by the large railway contracts which have been placed here, the tolerable regularity with which the various works are carried on, and the feeling the general tone of the enquiries received tend to inspire. The fine weather, which set in at the commencement of the week, has also had a cheerful influence upon the district, inasmuch as the works were all suffering, either directly or indirectly, from the long-continued heavy rains, the blast-furnaces being interfered with, at no inconsiderable loss to the proprietors. Independently of the retarding of operations at the works, the wet weather seriously affected transactions in miscellaneous descriptions of finished iron, and this branch of the trade has hitherto ruled very quiet, but with fine weather out of door operations will be carried on actively, and hence orders in this department may be expected to come in more freely. Generally speaking, business on home account is rather flat, the amount of transactions actually entered into being limited; still, as stated last week, the indications are, on the whole, encouraging as to the future. The old contracts from the markets of Northern Europe and British North America are on the eve of completion, and but few more cargoes are expected to be shipped this season. The requirements of those quarters are, however, reported to be rather heavy, and makers are looking out for orders for spring delivery. During the present week a few specifications have been received from the United States, and enquiries are, if anything, more numerous. Some parties, however, think that the fall trade will be far short of expectations, whilst others are more hopeful, and the general opinion may be said to incline to the belief that between this time and December a good business will be done. The South American trade is quiet, the demand being of a rather contracted character. It was expected that more of the Eastern railway contracts would have appeared in the market by this time, but doubtless they have been postponed for a time in consequence of the severe financial crisis at Bombay, which has been attended by some heavy failures. The continental advices continue to be reassuring, and negotiations for rails and bars have been lately entered into on Italian and German account. There is no improvement to record either in the demand or quotations for pig-iron. A fair amount of activity characterises the tin-plate trade, and at the quarterly meeting of makers the old prices of last quarter were unanimously adopted. There is no diminution in the demand for steam coal, and proprietors are well off for orders. In addition to the foreign markets, the mail packet coaling stations are taking considerable quantities, and there is an increase in the inland demand. The house coal collieries are more actively employed than they have been for some time past, and a much larger quantity is being shipped coastwise. The patent fuel works are moderately well employed, and the tonnage shipped during the past week has been, if anything, above the average.

The Pontrhydlyn Tin-Plate Works, the property of Messrs. Conway Brothers, have just had added to them a new rolling-mill, designed by and executed under the superintendence of Mr. T. Dyne Steele, C.E., of Newport. The mill is of the direct-acting principle, driven by a 50-horse power engine, made by Messrs. Coupe, of Wigan. The rolls are 25 in. by 24 in. diameter, and the fly-wheel 23 tons and 20 ft. diameter. There are two tubular boilers, 27 ft., by 6 ft. 6 in. diameter, and the other details have been carried out in a manner that reflects credit on Mr. Steele's ability. The works were completed in a little over three months, and the first week after starting 400 boxes of plates were rolled, and this is expected to be ultimately increased to 500 boxes. The castings were supplied by Mr. Charles Jordan, Newport.

The matter of Moore and Thomas, Cadonox-juxta-Neath, colliery proprietors, the bankrupts came up at the Bristol Bankruptcy Court on their adjourned last examination. Mr. A. Brittan, who appeared for the assignees, said he did not oppose the bankrupts, but he was instructed to ask for a further adjournment. This was a large matter; the estate involved a good deal of property, and there were certain points upon which the assignees should have information. The balance-sheet showed mortgaged property to the extent of £50,000, and the whole of it, or nearly the whole of it, was in the possession of the mortgagees, who appeared also to have taken plant belonging to the assignees to the amount of £5000. Mr. Edlin (instructed by Mr. J. Luskup), who supported the bankrupts, said they had done everything to entitle them to pass their last examination, and they had shown the utmost willingness to give all the information in their power. They would also attend at any time that Mr. Brittan might require them, and answer any questions. Both bankrupts were gentlemen of the highest respectability, and it was of consequence to them that they should pass. Mr. Thick, who appeared for Mr. Penny, of Pool, a creditor, occurred in Mr. Brittan's application. After some discussion, the sitting was adjourned to Dec. 4.

In re Llewellyn Lewis and William Lewis, Llantrissant, coal merchants. William Lewis had absconded, but had returned in time to surrender himself to the Court. No accounts had been filed, and the last examination and discharge was adjourned.

The Tillery Collieries, so long worked by the Tillery Colliery Company (Limited), are about to change hands, and operations are likely to be carried on more actively for the future. The men turned out a few days ago, in consequence of a dispute about wages, but it is satisfactory to report that matters have been arranged, and that they are again at work this week.

THE TIN-PLATE TRADE.—The quarterly meeting of the tin-plate trade was held at the Bell Hotel, Gloucester, on Wednesday, Mr. Woodruffe in the chair. There was a good attendance, upwards of twenty makers being either present or represented, and among the buyers who attended were Messrs. Nash and Co., Liverpool; Codrington and Co., New York; and Whittingore and Co., Liverpool. The meeting was characterised by a cheerful feeling, and, from the discussion that took place, it appeared that the present position of the trade is, upon the whole, a satisfactory one, makers being well off for orders, and future prospects are decidedly encouraging. From America orders are pouring in freely, and, in fact, the demand from that quarter is so brisk that manufacturers are unable to enter into engagements and deliver within the specified time. The home-enquiry is tolerably good, taking into consideration the severe monetary crisis which the country has just passed through. These circumstances, it was considered, fully justified an advance on last quarter's quotations, but as the shipping season to many markets is about closing for the winter months, it was thought desirable to fix prices the same as before—Charcoal 1C, 32s. per box, free on board at Liverpool, and other qualities in proportion, and a resolution to

that effect was unanimously agreed to. After the meeting the members, a usual, dined together.

MINING, METALS, AND MINERALS—PATENT MATTERS.

By M. HENRY, Memb. Soc. Arts, Assoc. Soc. Eng.

Among recent Applications for Patents appears one made by J. Duckett, of Burnley, No. 2464, for the rather peculiar subject of scouring-stones.—An application has been made from Massachusetts by O. T. Earle (communicated to W. R. Lake), for steam-pumps, No. 2469.—Lundy, of Leith, has applied for a patent relating to treating the residue of the purifying and distilling of mineral oils, No. 2472; and Hamilton, of Glasgow, for fuel, No. 2473. Also, Aydon and Jerram, of Westminster, No. 2476, for furnaces.—An application for patent has been made by Sellars, Birkenhead, for metal-founders' "blacking"—a substance which, lest non-technical individuals, unconscious of the useful arts, should suppose it to be the lustrous agent intended to render the tools of metal founders brilliant, may, for their edification, be described as a material employed for application to the interior of moulds used by founders. This remark is made *passim*, lest some "Colliery Engineer" should indulge in indigent ecstasies at the misery of a patent law which oppresses shoe-blacks by imposing fiscal and judicial restrictions on the exercise of their art.—An application for bronzing-machine, No. 2484, has arrived from America (being a communication from J. K. Lowe, of Cleveland, to G. Hasleth).—Among applications from the United States appears one made in the name of A. V. Newton, for distilling petroleum and other oils (a communication from Orozlo Lugo and T. O. Ludwig Schrader).—The following applications may also be cited: No. 2494, BURGUM, of Birmingham, puddling and heating furnaces and other furnaces used in the manufacture of iron and steel.—No. 2495, BAYLEY and CAMPBELL, of the Adelphi, for sheathing iron ships.—No. 2499, T. W. BUNNING, of Newcastle-on-Tyne, drifting and riveting machines.—An application, made by F. W. C. DROMTRA, of Sile-lane, No. 2504 (as a communication from T. Neuscheller, of Dresden, lodged on behalf of Mr. Dromtra by Mr. Henry, patent agent, Fleet-street), is for a subject matter likely to concern persons interested not only in "metals, mining, and minerals," but in a particular product of those matters, and of the arts connected with them, of interest to almost all mortals, viz.—"hard cash"—which long ago the Eton Latin Grammar connected with mining, metals, and minerals, by telling us how "Irritamenta malorum, effunduntur opes." The application to which reference is made is for the means of securing pocket-books and other portable articles on the person. Nobody, except the garrotting crew and, perhaps, philosophers whose ideas of the rights of property are circumscribed by their objection to the protection of tangible property, can object to a patent for an ingenious means of securing property on the person.—An application relating, not to the protection of property, tangible, or intellectual, or inventive, but to a far more valuable description of property—human life—has also been lodged by Mr. Henry, patent agent, Fleet-street, for Mr. W. RYAN and Mr. W. EGAR, of Dublin, for a fire-escape, No. 2507.—The following applications may also be mentioned: No. 2519, GUEUNIER LAURIAC, of Le Creusot, France, for casting iron.—No. 2522, WHITWORTH, of Manchester, for casting iron and steel.—No. 2527, CLARK (communication from Bon), for furnaces for treating metals and other matters.

Oppositions intended to the following five. Notices to Proceed must be lodged on or before the 23d inst.—No. 1462, GIBSON and ELLIS, making metal rods, bars, and tubes, and a new motive-power for working them.—No. 1469, GORANSSON, blast-furnaces and making iron.—No. 1477, HILL, rolls for rolling metals.—No. 2179, BERENGER, lime and cement kilns.—No. 2469 (communication from Earle), steam-pumps.

The following Patents have been sealed:—No. 1139, SPIQUEL and FLORANGE, Paris, stamping on metals; No. 1140, same patentees, incavating metals, or rendering them concavo-convex; and No. 1868, PLANT, making taper or conical and other form of wrought iron and steel tubes, and forming flanges thereon.—LYCETT, of Sandbach, Chester, has specified a patent for manufacturing salt, in which he takes the waste heat of the escaping mixed gases of furnaces in producing iron, and utilises them for heating and evaporating saline solutions, to obtain the salt or chloride of sodium contained therein; such waste gases the patentee conducts under evaporating pans or other heating apparatus; the furnaces are so contrived that air may be admitted, to promote combustion.—BANFILL, No. 158, has specified an improved coal-scuttle, in which the handle is applied to the axis of the hinge or joint on which the lid or cover turns, by extending the square or other heads of the axis of the lid slightly beyond the edge of the scuttle, the arm of the handle being brought down thereto, and fastened thereto, so that by pressing the handle backward the lid will rise upward on its hinge or bearing, the handle being brought to its uppermost position, thus causing the lid to close on the mouth of the scuttle. Thus, the opening of the lid or cover is controlled by the action of the handle, by the connection of the arms of such handle with the shaft of the cover, the arms being placed in separate bearings in the body of the scuttle, levers therefrom being brought in connection with the lid.

The specification of SAUVAN's improved cork-cutting machinery, patented in the name of Mr. Henry, patent agent, Fleet-street, relates to an arrangement of apparatus in which a stationary cutter is employed, while the cork on which it acts is held to it on moveable metal face-plates or discs, furnished with points for holding the cork, and somewhat resembling the chucks of a lathe. These face-plates, with the cork which they carry, receive simultaneously a rectilinear alternating motion and a rotary motion. The former is communicated to them (by hand or otherwise) by placing them on a carriage, caused to slide or travel in guide-ways in the framework. The rotary motion is obtained by causing a stud on a spindle, moved to and fro by the carriage, to travel along a helical or spiral slot cut in a metal tube, in which the spindle works, and to which spindle a rotary motion is thus imparted, and thence transmitted by gearing to the face-plates. There are sharpeners or whetstones mounted on the carriage, which sharpen the cutter as they travel. A fixed handle is combined with a moveable handle, the former serving to actuate the sliding carriage, and the latter to push one face-plate towards the other, and thus jam the cork on the same.

A QUARTER OF A MILE OF PETROLEUM.

A visit to the Petroleum Works at Zante is one of a very important and interesting character. No better description of the springs can be given than that written by Herodotus, although more than 2000 years ago. Even at the present time the Petroleum rises under precisely similar circumstances, and is carried by a small stream into the sea, which must have continued to flow for thousands of years. That this substance is valuable, and that the fountain must be enormous which has supplied the vast quantity that has been carried into the sea for such a lengthened period, cannot be doubted.

A few Englishmen, with that enterprise which is so strongly characteristic of the Anglo-Saxon race, taking into their consideration the enormous sum of money annually paid our transatlantic cousins for this valuable commodity, and looking also to the fact that these springs are within less than a mile of a good harbour, where vessels of the largest class may load in safety, while the freight is only one-half of what is paid from a shipping port in America to London, independently of the enormous cost of inland transportation from the wells in America to a shipping port, undertook the formation of a company in London, called the "ZANTE PETROLEUM COMPANY (Limited)," which last year purchased the freehold of this valuable property, sent out boring materials and experienced well-sinkers. It should be premised that there are two natural springs, separated by a gap of a quarter of a mile. Sinkings were commenced about 10 feet from each of these natural springs. After descending to the depth of a little more than 200 feet, the same vein of petroleum was cut in both wells. It rose and overflowed in one well, whilst it fell correspondingly in the other, thus clearly indicating that there is a mass of petroleum a quarter of a mile in length, but what the breadth or depth may be, it is quite impossible to conjecture. At times the petroleum flows over the top of one or the other, so that several thousand gallons have been collected from this natural overflow.

In the meantime the directors have taken active and energetic steps for the construction of proper machinery, pumps, and steam-engines for collecting the oil. All the machinery, together with a corps of special mechanicals, left in the steamer *H*

from the owner, but by an anonymous letter. The required notices, it appeared, are important, inasmuch as it is chiefly by them, together with intimations of danger sent by the miners, that the Inspector's movements are regulated in order to ascertain whether the Act is being complied with, and to have the requisite precautions taken for the future. The penalty is a sum not exceeding £20, but in this instance no blame was attributed beyond the omission to send the notices in the explosion, and the fine was mitigated to £1, and costs. At the Walsall Police Court, David Jeavons, manager of the Bloxwich Colliery Company's pits, was charged at the instance of Mr. J. P. Baker, the Government Inspector of Mines, for neglecting the ventilation of the pits, and for not having had them examined before the men descended. The fines inflicted were £5, and costs, and £5, and costs respectively.

THE BOILER EXPLOSION AT NORWICH.—The inquest on the bodies of the seven men killed by the late explosion at Messrs. Stark and Co.'s works has terminated in a verdict that the deceased met with their deaths through the explosion of a steam-boiler, such explosion being occasioned by the improper construction of it. The boiler was of the Cornish type, and manufactured by Mr. Cafferata, of Newark. Mr. Stark's instructions being that it was to be of the best material, and capable of working at a pressure of 100 lbs. with perfect safety. The boiler, according to the statement of Mr. L. E. Fletcher, of the Association for the Prevention of Boiler Explosions, burst in the external shell, at a longitudinal seam of rivets situated upon the left side of the shell, and in the third belt of plates from the firing end. The cause of this was not deficiency of water. The furnace crown was uninjured, while the plates must have been bulged or put out of shape had they been overheated from the shortness of water. The explosion must have been due either to excessive pressure of steam or defects in the making of the boiler, either from bad workmanship or bad material. He declared that the iron was brittle, and of indifferent quality.

OUR COAL SUPPLIES—NEW ERA OF ILLUMINATION.

Our Coal Supplies and our Prosperity; the Public Health; a New Era in Illumination; and Adams's Recent Astronomical Discovery. Would it be possible to select four titles more attractive to the general reader as headings for magazine treatises? These are the subjects treated of in the original articles in the October number of the "Quarterly Journal of Science,"* which is undoubtedly one of the most interesting numbers yet issued. The first article, which is accompanied by a coal map of the world, after alluding to the compactness of Mr. Hull's book, the sensational nature of Sir W. Armstrong's British Association address, the rise and fall of the Mill-Gladstone proposition for reducing the national debt at the expense of our commercial position, and to the almost certainty of the report of the Royal Commission containing plenty of suggestions and ample data for showing that they are unable to arrive at a positive conclusion, declares Mr. Jeavons's book to present evidence of honest care and perseverance, and to contain a great number of valuable facts, intermingled with conscientious but erroneous opinions. The enquiry is then arranged under six heads—What are the present sources of our Coal Supply in Britain? Are those sources likely to extend, and may we, in the course of time, have greater facilities for obtaining coal in Britain than we at present possess? Are there any means by which such additional supplies should now be sought or encouraged? How is our present supply consumed? What general changes are likely to occur in the application of our coal resources? And conclusions as to the probable future of Great Britain, as it is likely to be affected by changes in our manufacturing industry consequent upon a modification of our coal supply. The conclusions arrived at are:—

1.—That it is at present utterly impossible for anyone to define the boundary, either vertical or horizontal, of our coal strata; and, therefore, no estimates can at present be offered are far in excess of the views of our most sanguine geologists.

2.—That, looking at the coal resources of other countries, our exports are not likely to prove a permanent drain upon our resources, and our ocean steamers will, probably, ere long obtain cheaper supplies for their homeward voyages than they at present draw from English collieries.

3.—That any considerable increase in the cost of coal is likely to interfere materially in our iron trade, more especially the raw material, and that it is not unlikely that we may not only have to submit to the loss of our export trade, but may even find it more economical to import various forms of iron, crude and manufactured, from foreign countries.

4.—That there is no element of certainty in the continued increase in our consumption of coal for heating and lighting purposes, especially the latter; and that it is probable that the use of gas (which now takes about one-eighth of our whole supply) will, in time, be superseded by better lighting agents, just as it has to a large extent superseded candles.

5.—That the most valuable staple manufactures of Great Britain absorb a comparatively insignificant portion of our whole coal resources, and it is to be hoped that any enhancement in the price of coal will be more than compensated by increasing material prosperity, enabling the manufacturer without inconvenience to pay such an extra cost of fuel. At any rate, it is clear that a very great absolute increase may, and probably will, take place in our general home production and foreign trade barter in valuable manufacture, with hardly a perceptible effect upon our coal resources.

Passing the article on The Public Health, we come to that by Mr. W. Crookes, F.R.S., upon A New Era in Illumination, which, upon mature consideration, will most certainly be found to be worthy of the same qualified approbation as the "Journal of Science" accords to the work of Mr. Jeavons—"It contains a great number of valuable facts, intermingled with conscientious but erroneous opinions." The description given of the machine leads to the conclusion that it is a highly ingenious philosophical toy of no practical utility. Were the claims put forward by those interested in introducing the machine just, it would prove that many acknowledged and incontrovertible facts, were fallacies; it would be necessary before even hoping for the substantiation of those claims to admit the truth of two palpable fallacies—that where power is gained time need not be lost, and that perpetual motion is readily attainable. As Mr. Crookes would not be likely to admit either of these propositions, he has, of course, no justification for eulogising the new machine. It is observed that, like most practical applications of science, the important results which Mr. Wilde has obtained depend more upon an ingenious combination of several known facts, united with considerable engineering skill, than upon any really new and striking discovery in the science, and that the principle of the machine can be expressed in a few words:—

It consists in the application of the current from an electro-magnetic machine, armed with permanent magnets, for the purpose of exciting a powerful electro-magnet; this electro-magnet being now used as the basis of a still larger electro-magnetic machine, for the purpose of having induction currents generated by its agency—in other words; by well-known means an electric current can be obtained by the rotation of an armature close to the poles of the magnet. If this electric current be passed round an electro-magnet, it may be made to produce a far greater amount of magnetism than was possessed by the first magnet. There is no difficulty, therefore, in comprehending how, by the mere interposition of a rotating armature, and the expenditure of force, a small and weak magnet may be made to actuate a very powerful magnet. But as the power of the magnet increases, so does the power increase of the electric current, which may be generated by induction in an armature rotating between its poles. We have, therefore, only to pass this No. 2 induced current from No. 2 magnet round a still larger magnet, No. 3, and by rotating an armature between its poles we can get a still more energetic induced current, No. 3. Theoretically, there is no limit to this plan; it is a species of evolution, and when it is considered that each conversion from magnet No. 1 to magnet No. 2, &c., or from induced current No. 1 to induced current No. 2, &c., multiplies the power very many times, it will not be considered surprising that after three involutions the induced current possesses such magnificent powers.

Now, there is here a mass of facts, no doubt, but they would certainly seem to be injudiciously applied; for taking a simple rational view of the question as stated, it will be obvious that if we have such an enormously increased power at No. 3 magnet—if the induced current "multiplies the power many times"—there is no reason why a portion of the power of this No. 3 magnet should not be used to make No. 1 magnet rotate, leaving that portion of power representing the difference between the power required to drive No. 1 magnet and the power existing at the end of No. 3 for application to other purposes. Here the absurdity is apparent, for we should have perpetual motion and a large balance of power as profit, since it is certain that if the increased power be there it can be as readily applied to produce motion as to produce light, and this reduces us to the alternative of acknowledging that the great mathematical truths taught in our schools and colleges are really truths as they profess to be, or of admitting that we are justified upon the mere assertion of Mr. Wilde or of Mr. Crookes in condemning all mathematical knowledge as useless. With respect to electricity, it may be said that we are as yet but imperfectly acquainted with it, or with its powers, but the existence of different kinds of currents is well known, and it is equally well known that according to the distance a current of electricity has to traverse, so will the time required for its transit increase—to suppose the practical success of this increase-of-power system, both these facts must be ignored, and hence it is that the rational conclusion would appear to be that although the light may be obtained as suggested, it can only be at a cost which would render it undesirable to employ it, even were it proved that the system possessed some of the advantages claimed.

In addition to the papers already referred to, the number contains

the article on Adams's Recent Astronomical Discovery, by Mr. Richard A. Proctor, B.A.; an admirable report of the meeting of the British Association for the Advancement of Science, and the usual Chronicles of Science.

MINING NOTABILIA. [EXTRACTS FROM OUR CORRESPONDENCE.]

WEST CARADON MINE during the week has further considerably improved, and some important discoveries are likely soon to take place which may cause shares, now at 13*l*, to 14*l*, at no distant date to see a high figure, perhaps as high as ever they were (viz.), 90*l*. to 100*l*. each. This mine has already given 100,000*l.* in dividends, and may do so again, as there are numerous rich lodes going into the south ground, where nothing as yet has scarcely been done.

EAST ST. JUST MINES.—As a small holder, I hope everyone in this company will take up all the new shares he can. There has not been for many years such a chance of success as the offer of the managing director will give us, and it ought to be well supported, as I understand he will cancel his offer if all the shares are not taken up in the course of a fortnight. I am sure we ought to be greatly obliged to him for so liberal and spirited an offer, and although I am only, it is true, a small shareholder, yet I am quite willing to treble my shares rather than let it fall through. I understand that a good many holding a few shares have not subscribed, thinking their interest is too trifling; but unless everybody takes some shares, I believe we shall lose the property. The shares must become very valuable in a few months, and the property become a great concern, as there is nothing to prevent the returns gradually increasing to 30 or 40 tons of tin a month, I presume. I hope my brother-shareholders will do all in their power to support a step which will greatly increase the value of our property.—C. S.

PRINCE OF WALES.—This mine was inspected on Thursday by several agents, and among them were two of considerable local celebrity. Their reports were given for private purposes, and, therefore, not intended for publication. One, however, states that "No lode has been taken down in either of the bargains; the lode in the 45 fathom level east, I have not the slightest doubt but the next taking down will be a much better one than ever has been taken down before. As far as the lode can be seen, where driven on by the side it is very fine. I am of a strong opinion the lode in the 45 west will show a very great improvement when taken down; also a good lode in the rise. These points will be opened up next week. I can only repeat my former opinion—the mine is safe to be a great prize, and every foot which they open on the lode in the 45 fathom level is strengthening the prospects of the mine. The ore now in course of dressing will be found to exceed the agent's valuation. I can assure you I have never seen the prospects equal to what they are at the present time." The other is to the effect that "In the 45 east there is about 9 feet of lode standing, and from its general appearance towards the breast of the end, I think you may safely calculate on a great improvement when taken down. They have commenced putting up a rise in the back of this level, a little behind the present end, where the lode is worth 40*l.* per fathom."

DARREN.—The description, with working plans, of this mine, which were to have been published in this week's Journal, are unavoidably delayed; they will appear next week.

THE COAL AND IRON TRADES OF NORTH STAFFORDSHIRE.—The quarterly meeting of the North Staffordshire Coal and Iron Masters' Association was held on Thursday, at Stoke-on-Trent, Mr. Wragge presiding. It was decided to make no alteration in the price of finished iron. The trade was reported quiet, and the demand was not yet sufficient to keep the mills in the district fully employed. Pig-iron makers were stated to be pretty well sold, but the depression in the finished iron department had an unfavourable effect on the consumption of pigs. At the same time, however, there were no large stocks in the district, and the make was being taken by consumers with considerable regularity at the old quotations. It was decided by the sellers of ironstone to make no change in the prices as fixed at the beginning of the year, and it was stated that there was a moderate demand for the ensuing quarter's consumption. The coal trade is still rather dull for the time of the year, and the demand not equal to the quantity which the district is able to raise.

PRICE OF LAND IN WALES.—On Saturday last, at the Sportsman Hotel, Carnarvon, a number of freehold farms, in the neighbourhood of Pwllheli, were put up for auction by Mr. Wm. Dew, of Bangor. The sale took place in the coffee-room, which was crowded with the tenants of the various farms and the gentlemen in the immediate neighbourhood, who entered into the competition with a keenness which showed that the land was not to be had for nothing.

—That any considerable increase in the cost of coal is likely to interfere materially in our iron trade, more especially the raw material, and that it is not unlikely that we may not only have to submit to the loss of our export trade, but may even find it more economical to import various forms of iron, crude and manufactured, from foreign countries.

—That there is no element of certainty in the continued increase in our consumption of coal for heating and lighting purposes, especially the latter; and that it is probable that the use of gas (which now takes about one-eighth of our whole supply) will, in time, be superseded by better lighting agents, just as it has to a large extent superseded candles.

—That the most valuable staple manufactures of Great Britain absorb a comparatively insignificant portion of our whole coal resources, and it is to be hoped that any enhancement in the price of coal will be more than compensated by increasing material prosperity, enabling the manufacturer without inconvenience to pay such an extra cost of fuel. At any rate, it is clear that a very great absolute increase may, and probably will, take place in our general home production and foreign trade barter in valuable manufacture, with hardly a perceptible effect upon our coal resources.

Passing the article on The Public Health, we come to that by Mr. W. Crookes, F.R.S., upon A New Era in Illumination, which, upon mature consideration, will most certainly be found to be worthy of the same qualified approbation as the "Journal of Science" accords to the work of Mr. Jeavons—"It contains a great number of valuable facts, intermingled with conscientious but erroneous opinions." The description given of the machine leads to the conclusion that it is a highly ingenious philosophical toy of no practical utility. Were the claims put forward by those interested in introducing the machine just, it would prove that many acknowledged and incontrovertible facts, were fallacies; it would be necessary before even hoping for the substantiation of those claims to admit the truth of two palpable fallacies—that where power is gained time need not be lost, and that perpetual motion is readily attainable. As Mr. Crookes would not be likely to admit either of these propositions, he has, of course, no justification for eulogising the new machine. It is observed that, like most practical applications of science, the important results which Mr. Wilde has obtained depend more upon an ingenious combination of several known facts, united with considerable engineering skill, than upon any really new and striking discovery in the science, and that the principle of the machine can be expressed in a few words:—

Cargill Mines—Michell's 72 in. Millions 53·7
Cook's Kitchen—50 in. 50·0
Crane—70 in. 50·7
Great Work—Leed's 60 in. 61·1
North Roskar—Doctor's 70 in. 59·2
North Wheal Crofty—Trevenson's 80 in. 56·0
West Caradon—Elliot's 50 in. 56·9
West Chiverton—Hawke's 80 in. 56·6
West Wheal Seton—Harvey's 85 in. 62·4
Wheal Seton—Tilly's 70 in. 64·1

HEAD MINING CAPTAIN.—WANTED, for a CUPREOUS SULPHUR ORE MINE IN SPAIN, from which a railway to the port is about to be constructed. THOROUGHLY PRACTICAL and COMPETENT CAPTAIN, who will have the entire charge of the underground workings. A liberal salary will be given. A knowledge of Spanish indispensable.—Apply by letter only, stating age and qualifications, to "D. M." Messrs. C. Smith and Sons, Hart-street, Mark-lane, London, E.C.

UNDERGROUND AGENT WANTED. for a Lead Mine in South Wales, raising from 50 to 80 tons ore per month. A liberal salary will be paid. Must be a thorough practical miner, and a man of experience. He must be able to dial and plan same. None need apply except those whose character and abilities will bear the strictest investigation.—Address, stating full particulars and references, "Underground Agent," MINING JOURNAL office, 26, Fleet-street, London, E.C.

MANAGER, OR SECRETARY.—A GENTLEMAN, of 20 years' experience in the Railway, Mining, and Monetary Markets, SEEKS AN APPOINTMENT. High testimonials.—Address, "Scrip," MINING JOURNAL office, 26, Fleet-street, London.

A GENTLEMAN having an extensive connection with merchants, manufacturers, and others, would be GLAD to UNDERTAKE the SALE of PATENTED ARTICLES or INVENTIONS, upon commission.—Apply to Mr. W. T. Rawley, patent and mining agent, 8, Small-street, Bristol.

WANTED, by a gentleman in the Midland Counties, an APPOINTMENT for the SALE of IRON, COAL, and IRONSTONE, either on commission or purchase. Terms, cash if necessary. Quality must be first-class.—Apply to Mr. Jas. Saunders, Metal Broker and Commission Agent, Darlington-street, Wolverhampton.

A CONFIDENTIAL AGENT, having been recently sent to inspect several mining properties near AUSTIN, NEVADA, where he now is and will remain for a limited period, his principals are WILLING to EXECUTE through him any INVESTIGATIONS or other COMMISSIONS on behalf of parties in this country.—Communications to be addressed promptly to "B. Y." care of Davies and Co., advertising agents, Finch-lane, Cornhill.

COPPER MINE.—TO CAPITALISTS.—TO BE SOLD, BY PRIVATE TREATY, and on most reasonable terms, a very VALUABLE COPPER MINE, situate in the North of England. For information and full particulars, apply to Mr. ELIAS J. BEON, Mining Engineer, Swansea.

CHINA-CLAY.—FOR SALE, CHINA-CLAY WORKS in full work. Principals only treated with.—Apply to Messrs. KINSMAN and HOCKADAY, Auctioneers, St. Austell.—Oct. 4, 1866.

FOR SALE, the WHOLE or a SHARE in an admirably situated GOING COLLIERY in the centre of FRANCE, connected by a siding with the Orleans Railway, and containing seams considerably more than 100 yards thick, with large quantities of ironstone in the neighbourhood.—For particulars, address, "A. Z." MINING JOURNAL office, 26, Fleet-street, E.C.

SUBMARINE WIRES AND CABLES.—ON SALE, about FIFTY MILES, sizes assorted, from $\frac{1}{2}$ to $\frac{1}{4}$ in. diameter, at one-half the first cost, in perfect condition.—Apply to Messrs. GARNOCK, BIBBY, and Co., Hemp and Wire-ropes Manufacturers, Liverpool.

ENGINES FOR SALE.—A 50 in. PUMPING ENGINE, 9 and 8 feet stroke, with TWO BOILERS, 10 tons each, in excellent condition. Also a 24 in. cylinder STAMPING ENGINE, 7 feet stroke, with 10-ton BOILER, equal to new.—Apply to Messrs. KINSMAN and HOCKADAY, Auctioneers, St. Austell, Cornwall.—Oct. 4, 1866.

Memorial to the late Nicholas Wood, Esq.

MEMORIAL TO THE LATE NICHOLAS WOOD, Esq.—A PUBLIC MEETING of the COAL TRADE and others will be HELD in the Neville Hall, Newcastle-on-Tyne, on SATURDAY, October 13, 1866, at Twelve o'clock noon, to receive the Report of the Committee appointed to consider the best mode of applying the Fund; and also to decide as to the nature of the Memorial to be erected.

JOHN TODD, Hon. Sec.,
Hetton-le-Hole, Fence Houses.

LECTURES ON MINERALOGY AND GEOLOGY AT KING'S COLLEGE, LONDON. are given on WEDNESDAY and FRIDAY mornings from Nine to Ten, by Prof. TENNANT, F.G.S. Those on MINERALOGY begin on Friday, the 5th October, and terminate at Christmas; fee, £2 2s. Those on GEOLOGY commence in January and continue till June. A shorter course of Lectures on MINERALOGY and GEOLOGY is delivered on Wednesday evenings, from Eight till Nine. These begin on the 10th of October, and terminate at Easter; fee, £1 1s. 6d. Mr. TENNANT accompanies his students to the public museums and to places of geological interest in the country.

R. W. JELF, D.D., Principal.

ANALYSES OF COAL, CANE, MINERAL OILS, and all OIL PRODUCING MINERALS are UNDERTAKEN by A. NORMAN TATE, F.A.S.L., &c., ANALYTICAL and CONSULTING CHEMIST, and CHEMICAL ENGINEER (Author of "Petroleum and Its Products," &c.), MOLD, NORTH WALES.

Plans and estimates for oil and chemical works prepared, and their erection superintended.

Assays of metals and their ores carefully conducted.

THE CWT-Y-BUGAIL SLATE COMPANY (LIMITED).—NOTICE OF CALL.—FIFTH CALL, OF £5 PER SHARE, MAKING £55 PER SHARE PAID.—Notice is hereby given, that the Board of Directors of the Cwt-y-Bugail Slate Company (Limited) have this day made a CALL OF FIVE POUNDS PER SHARE on the shares in their Company, payable on the 24th Inst., at Messrs. Roberts, Lubbock, and Co., London; or Messrs. Williams and Co., Chester, Bangor, and Carnarvon. Shareholders are, therefore, requested, on or before those days, to pay the amounts on the shares of which they are the registered proprietors.

JOSEPH HAYWOOD, Managing Director.

L LANFAIR AND PRINCE OF WALES SLATE QUARRIES.—FOR SALE, SIXTY LLANFAIR SHARES (£3 paid), at £2; SIXTY PRINCE OF WALES SHARES (£4 paid), at £3. These quarries, which will shortly enter the dividend list, are under the management of Mr. T. HARVEY, whose letters are to be seen in the MINING JOURNAL, *passim*. Address, "N. K. H." MINING JOURNAL office, 26, Fleet-street, London, E.C.

SOUTH WHEAL LEISURE.—FOR SALE, from FORTY to FIFTY SHARES, at £1 7s. 6d. each.

NEW CLIFFORD—FIVE SHARES, at £2 5s. each.

ST. BRIDE'S SLATE—FIFTEEN SHARES, at 17s. 6d. each.

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CHONTALES GOLD MINING COMPANY.—A CIRCULAR containing particulars relative to this company's mines, and explaining the position of the different classes of shares, can be obtained on application at the office of Mr.

E L F O R D, W I L L I A M S, A N D C O.,
COPPER ORE WHARFINGERS,
SHIP BROKERS AND COAL EXPORTERS,
METAL AND GENERAL COMMISSION AGENTS,
SWANSEA.

ELFORD, WILLIAMS, and Co. having erected an assay office, and engaged the services of a practical Cornish assayer, who will devote his whole time to this branch of their business, they are now in a position to make correct assays of silver, copper, and other mineral ores, on the most moderate terms.

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MANUFACTURERS OF STEAM PUMPING AND EVERY OTHER KIND OF ENGINES, together with BOILERS, PUMP CASTINGS, and MINING TOOLS of every description, of the very best quality. Estimates given for the supply of any amount of machinery.

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N.B.—Any person making or using the above machines, without previously obtaining a license, will be proceeded against according to law.

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VALVES—for Marine and Land Engines' Steam Packing, sheet or roll.
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GAUGE GLASS RINGS; WASHERS.

Price Lists free on application.

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C O A L C U T T I N G M A C H I N E R Y.—The WEST ARDSLEY COMPANY having, by recently patented improvements, perfected their coal cutting machinery, worked by compressed air, are NOW READY TO MAKE CONTRACTS for the CONSTRUCTION and USE of their MACHINES.

The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, these now being found to CLEAVER the COAL and IMPROVE the average SIZE of the COAL, to LIGHTEN the LABOUR, and also to MODIFY the SANITARY CONDITION of the MINE.

All communications to be made to Messrs. FIRTH, DONNISTHORPE, and BOWER, No. 8, Britannia-street, Leeds.

N O T I C E.—The WEST ARDSLEY COMPANY, having reason to believe that their patents are being infringed upon, hereby give notice that they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may MAKE FOR SALE, or USE ANY MACHINERY in the construction of which any such INFRINGEMENT is MADE.

S A F E T Y F U S E.—Messrs. WILLIAM BRUNTON AND CO., PENHALLICK, POOL, near CAMBORNE, CORNWALL, and BRYMBO, near WREXHAM, MANUFACTURERS OF FUSE, of every size and length, as exhibited in the Great Exhibition of 1851, and supplied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe.

For the convenience of their customers and others in the North, W. BRUNTON and Co. have recently erected a branch manufactory at Brymbo, near Wrexham, where, as at Cornwall, they are at all times PREPARED TO EXECUTE UNLIMITED ORDERS for SUPPLYING FUSE, upon warrant that it will prove equal to, if not better than, any to be procured elsewhere.

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G A R N O C K, B I B B Y, A N D C O.,
CHAPEL STREET, LIVERPOOL.
MANUFACTURERS OF FLAT and ROUND HEMP and IRON and STEEL WIRE ROPES FOR MINING, RAILWAY, and SHIPPING PURPOSES.
MANILLA ROPE OF SUPERIOR QUALITY, FIFTY PER CENT. STRONGER and THIRTY PER CENT. CHEAPER than Russian hemp rope.

WIRE ROPE OF FIRST QUALITY WIRE, and the HIGHEST STANDARD of STRENGTH.

Patent Flat and Round Wire and Hemp Ropes, &c.
JOHN AND EDWIN WRIGHT, PATENTEES,
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ESTABLISHED 1770.

Manufacturers of every description of IMPROVED PATENT FLAT AND ROUND WIRE ROPES, From the very best quality of charcoal iron and steel wire.

PATENT FLAT AND ROUND HEMP ROPES,
SHIPS' RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horsfall's patent steel), WIRE, HEMP, FLAX, ENGINE YARN, COTTON WASTE, &c.

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No. 2, OSWALD STREET, GLASGOW.
CITY OFFICE, No. 19, LONDON STREET, LONDON.

PATENTS AT HOME AND ABROAD.—INVENTORS desirous to SECURE INVENTIONS and DESIGNS by PATENT or REGISTRATION, may obtain ADVICE and INFORMATION by applying to Mr. HENRY, Memb. Soc. Arts, Assoc. Soc. Eng., Consulting Patent, Registration, and Copyright Agent, 68, Fleet-street, London, corner of and entrance in Whitefriars street. Technical translations effected. Drawings and lithographs prepared.

R E D L I O N H O T E L, T R U R O.—OLD-ESTABLISHED FIRST-CLASS FAMILY, COMMERCIAL, AND POSTING HOUSE.—In returning thanks to the nobility, gentry, commercial gentlemen, and the public generally for their patronage for many years past, MRS. DOBB begs to inform them that no effort on her part will be wanting to afford every comfort, and thus obtain a continuation of their support.

Superior accommodation to families, tourists, and mining gentlemen travelling on business or pleasure, at moderate charges. Ladies' and gentlemen's coffee and private sitting-rooms. Table d'hôte daily. First-class cooks. Dog-carts, waggonettes, and carriages of all descriptions. Hears and mourning-coaches. Excursion and railway omnibuses.

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R A I L W A Y S A N D M I N E S.—Capitalists who seek safe and profitable investments, free from risk, should act only upon the soundest information. The market prices for the day are for the most part governed by the immediate supply and demand, and the operations of speculators, without reference to the *bona fide* merits of the property. Railways depend upon the traffic, expenditure, and capital accounts, the probabilities of alliance or competition with neighbouring companies, the creation of new shares, the state of the Money Market as affecting the renewal of debentures, and other considerations founded on data to which those only can have access who give special attention to the subject. Mines afford a wider range of profit than any other public securities. The best are free from debt, have large reserves, and pay dividends bi-monthly varying from £10 to £15 per cent. per annum. Instances frequently occur of young mines rising in value 400 or 500 per cent. But this class of security, more than any other, should be purchased only upon the most reliable information. The undersigned devote special attention to Railways and Mines, afford every information to capitalists, and effect purchases and sales upon the best possible terms. Thirty years' experience in mining pursuits justifies us in offering our advice to the uninformed in selecting mines for investment.

MESSRS. TREDINNICK AND CO., ST. MICHAEL'S HOUSE, CORNHILL, LONDON.

M. R. W. H. J A M E S, C. E., T H E R A I L W A Y P I O N E E R.—The earnest appeal of this gentleman not having been responded to, except to the extent of £10, in postage-stamps from the agents of Botallack Mine, Mr. James desires to explain that his present unfortunate position does not arise from extravagance on his own part or that of his family, but solely from the failure of parties upon whom he has depended for his entire income. Mr. James has been an invalid for more than twenty years, and will be glad if some of the speculative readers of the *Minning Journal* (in which so much has been written concerning him that his claims and the character of his inventions must be thoroughly well known) will call upon him by appointment at his residence, and inspect his numerous drawings and models; he has no doubt that they will not have reason to regret the interview.

Among the inventions to be disposed of, wholly or in part, are—

1.—A SHARE, by way of royalty, in a NEW HIGH-PRESSURE STEAM-GEN-ERATOR, every part of which is equal in strength to that of an Armstrong gun.

2.—A NEW COMPRESSED AIR AND STEAM ENGINE, possessing extra-ordinary advantages over the present high-pressure steam-engine. A highly-finished engine upon this principle, of from 20 to 20 horse power to be seen in operation. A cheap substitute for harbours of refuge.

3.—A NEW SYSTEM OF TRANSIT FOR PASSENGERS AND GOODS, pos-sessing several important advantages over the present railway system, especially for the rapid conveyance of passengers from one locality to another.

All the before-mentioned inventions are secured by Letters Patent.

Inventions consisting of improvements upon former Letters Patent.

1.—A METHOD OF ASCERTAINING THE PRECISE LOCALITY OF ANY FIRE IN OR AROUND THE METROPOLIS, and of communicating intelligence therewith in the course of a few minutes at the several fire-stations, generally a considerable time before it passes through the roof and becomes externally visible.

2.—A CHEAP MODE OF TRANSMITTING LETTERS AND DESPATCHES 200 miles an hour and upwards, from one locality to another.

With numerous other inventions of a very important character.

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£250,000 HAVE BEEN PAID AS COMPENSATION

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For particulars apply to the Local Agents, at the Railway Stations, and

OFFICES, 64, CORNHILL, and 10, REGENT STREET.

W. J. VIAN, Sec.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WHEAL WILLIAM MINING COMPANY.—By an Order made by His Honour the Vice-Warden of the Stannaries in the above matter, dated the 29th day of September last, on the petition of Thomas Martyn, of Wadebridge, within the said Stannaries, a creditor of the said company, it was ordered that the WHEAL WILLIAM MINING COMPANY should be WOUND-UP by this Court under the provisions of the Companies Act, 1862.

Dated Truro, Oct. 1, 1866.

HODGE, HOCKING, AND MARRACK,
Petitioner's Solicitors, Truro.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

PURSUANT to two several Decrees made in the consolidated Causes of Tregwynn v. Rabey, and Read v. Same, the CREDITORS in respect of SOUTH WHEAL LEISURE MINE, in the parish of Perranzabuloe, within the said Stannaries, are, on or before Wednesday, the 10th day of October inst., to COME IN and PROVE THEIR DEBTS before the Registrar of the said Court, at his office, in Truro, or in default thereof they will be summarily excluded the benefit of the said Decrees.

Dated Registrar's Office, Truro, October 3, 1866.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

TO BE SOLD, pursuant to an Order made in a Cause Higgs and Another v. Oman and Others, dated the 27th day of September last, at the Registrar's Office at Truro, on Wednesday, the 17th day of October inst., at One o'clock in the afternoon.

12 (572ds) SHARES or PARTS of the defendant Henry Oman; and 4 (572ds) SHARES or PARTS of the defendant Elizabeth Oman, of and in the said MINE.

HODGE, HOCKIN, AND MARRACK, Truro
(Agents for R. H. Bamfield, Plaintiffs' Solicitor, St. Ives, Cornwall).

Dated Registrar's Office, Truro, October 3, 1866.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

TO BE SOLD, pursuant to an Order made in a Cause Pike and Another v. Scott and Others, dated the 27th day of September last, at the Registrar's Office, at Truro, on Wednesday, the 17th day of October inst., at One o'clock in the afternoon.

2 (4600ths) SHARES or PARTS of the defendant Joseph Michell, of and in the said MINE.

HODGE, HOCKIN, AND MARRACK, Truro
(Agents for S. T. G. Downing, Plaintiffs' Solicitor, Redruth).

Dated Registrar's Office, Truro, October 4, 1866.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

TO BE SOLD, pursuant to an Order made in a Cause Pike and Another v. Gabbott and Others, dated the 27th day of September last, at the Registrar's Office, at Truro, on Wednesday, the 17th day of October inst., at One o'clock in the afternoon.

15 (3435ths) SHARES or PARTS of the defendant Edward Gabbott, 5 (3435ths) SHARES or PARTS of the defendant Jane Pauli; and 1 (3435th) SHARE or PART of the defendant Samuel Kendall, of and in the said MINE.

HODGE, HOCKIN, AND MARRACK, Truro
(Agents for S. T. G. Downing, Plaintiffs' Solicitor, Redruth).

Dated Registrar's Office, Truro, October 4, 1866.

In the County of Anglesey, North Wales.

SALE OF VERY VALUABLE FREEHOLD FARMS, TENEMENTS, AND QUILLETS, comprising about SEVEN HUNDRED ACRES.

MR. W. DEW has been favoured with instructions to SELL, BY AUCTION, at the Bull Hotel, Llangoed, on Thursday and Friday, the 18th and 19th days of October, 1866, commencing each day at Two o'clock for Half-past, at the Law Society's Rooms, Cook-street, Liverpool, ONE HUNDRED AND THIRTY-FOUR SHARES in the MOUNT PLEASANT LEAD MINE, near Mold.—For further particulars, apply to Mr. EDWARD ROBERTS, the secretary; or to Messrs. WALKER and ACKERLEY, 55, Church-street, Liverpool.

IN THE COUNTY OF LLANDUDNO, NEAR MOLD.—Ffed Fawr, alias Neunad Gam, in lots; Tyn-llwyn, in lots; Cae dan y Penre, Quillits in Lleiniog.

IN PENMON PARISH.—Dryllian Brynnawr, Quillits in Lleiniog.

IN LLANDDODA PARISH.—Pentrellwyn Isaf, in lots; Pentrellyn Uchaf, in lots; Bryndona, in lots.

IN LLANIESTYN PARISH.—Quillits in Penhwnllys Farm.

IN PENTRATH PARISH.—Ail-y-Mount.

IN LLANSAWDRW PARISH.—In Penheskin Farm, Llaien Gabriel; Cae Marchog, alias Tyddyn Ellen Coymtor.

IN PENMYYDD PARISH.—One-third undivided moiety of March Ynys.

IN LLANDESILO PARISH.—Molety of Llaien y Fran, alias Llaien Marni Rhodri, part of Tyn y myndd Farm, Llaien Sgubor Degwm, part of Four Crosses Farm, Cae Pwll y Fran, part of Tyn y myndd Farm, Llaien Glover ucha, and Isaf, and Quillit in Llaien Newydd, and Tyn y eae, in lots.

IN LLANFAIRPWYGNYLL PARISH.—Allotments in Rhosygad Common.

IN PENMYYDD PARISH.—Cae Mawr, or Tynfawnd.

IN LLANBEDROG PARISH.—Plas-grohyd Isaf.

IN LLANFAIRMAETHAFARNEITHAF PARISH.—Ysgubor Wen, Ynys Goch, Minford, Cae Penrhaf.

IN LLANFYNAN PARISH.—Benllech, eight cottages and garden, Ty Newydd, part of Garreg Wen, Pant y Morllo, part of Garreg Wen, Cae Chwarel, Garreg Wen, part of Garreg Wen, Cae'r Capel, Tyn y beudy, in lots; Pen Chwarel, part of Castell Cadarn, Cae Robert, Castell Cadarn, Tanrallt, Tyddyn Bailey, Ty Gwyn.

IN LLANFYNAN PARISH.—Bryn y Gorys.

IN LLANWROG PARISH.—Rhiew.

IN LLECHGYNPARWYD PARISH.—Nine Houses, Smithy, and Garden, situated in the town of Llanrhyched.

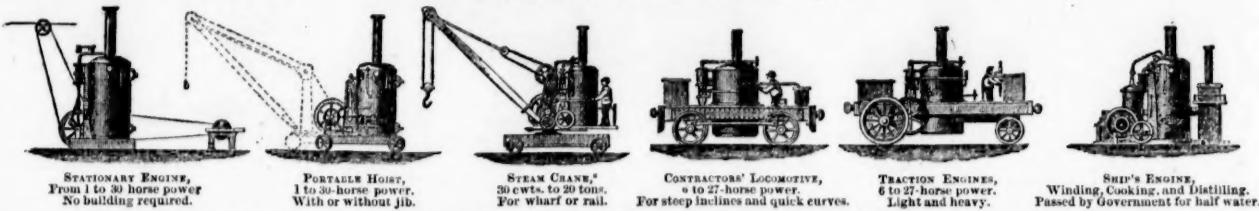
IN LANBADIR PARISH.—Isafll, in lots.

There are several small lots near Beaumaris, Menai Bridge, and Cemaes Bay, beautifully adapted for Villa Residences, commanding magnificent sea and mountain views.

Lithographed plans and full particulars may be had at the principal hotels in Anglesey and Carnarvonshire; of Messrs. BLOXHAM, ELLIS, and BLOXHAM, 1, Lincoln's Inn, London; and from the Auctioneer, Wellfield House, Bangor.

CHAPLIN'S PATENT PORTABLE STEAM ENGINES AND BOILERS.

PRIZE MEDAL, INTERNATIONAL EXHIBITION, 1862.



* These cranes were selected by H.M. Commissioners to receive and send away the heavy machinery in the International Exhibition.

From the STRENGTH, SIMPLICITY, and COMPACTNESS of these ENGINES they are extensively USED for GENERAL PURPOSES, and also in situations where STEAM-ENGINES OF THE ORDINARY CONSTRUCTION CANNOT BE APPLIED.

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Parties are cautioned against using or purchasing imitations or infringements of these patent manufacturers.

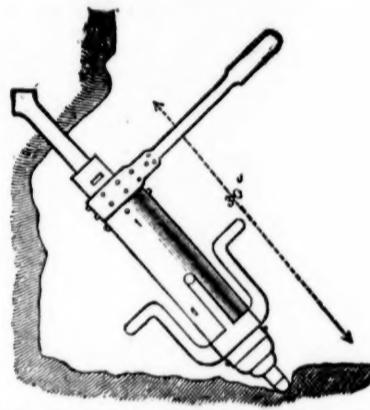
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THE BEST STEAM THRASHING MACHINERY MADE.

Patented Boring and Blasting Machines.



PATENTED BORING AND BLASTING MACHINES.—

Weight of the machine, 46 lbs. One man works the machine. Difference in length of the borers, 11 inches.

PRICES.

Boring machine	£20 0 0
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For further particulars, apply to—

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NITRO-GLYCERINE, OR NOBEL'S PATENT BLASTING OIL.—The EXPLOSIVE FORCE of this BLASTING OIL is TEN TIMES that of GUNPOWDER, and the ECONOMY and SAVING in TIME, LABOUR, and COST in removing granite and hard rock, in sinking shafts, driving tunnels, and opening forward in close ends is immense.

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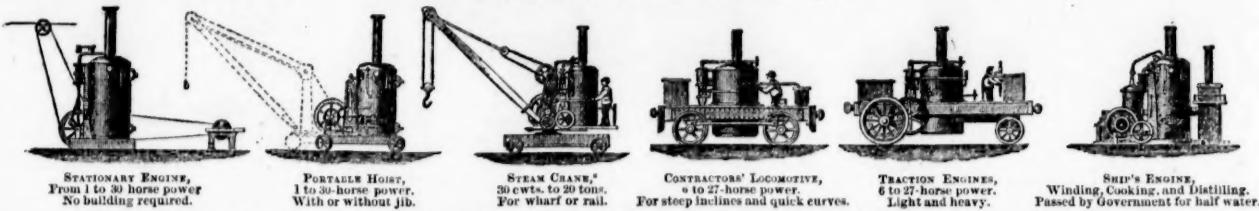
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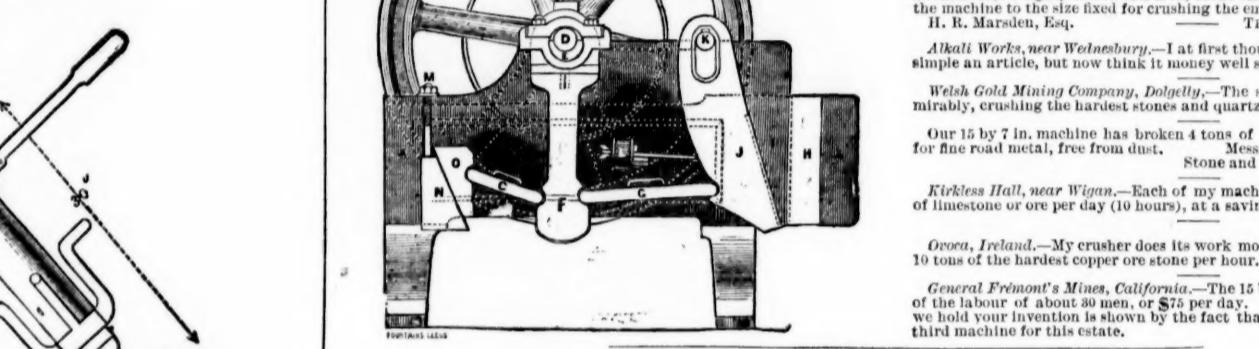
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The advantages of gun-cotton for mining purposes consist—1. In its immense power and velocity of discharge.—2. The absence of smoke.—And 3. That if exposed to damp it can be restored by drying, and rendered as effective as at first.

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THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
1500 Alderley Edge, c, Cheshire*	.....	10 0 0 ..	8 7 8 ..	0 10 0 ..	Aug. 1866		
200 Allotallack, t, St. Just	91 5 0 ..	300	488 15 0 ..	5 0 0 ..	May, 1866		
10000 British slate Company	9 0 0 ..	—	—	9 per cent.	Sept. 1866		
10000 Bronfroyd, t, Cardigan*	12 0 0 ..	—	8 7 0 ..	0 6 0 ..	Aug. 1866		
6400 Cashwell, t, Cumberland*	12 0 0 ..	—	0 1 6 ..	0 1 6 ..	Aug. 1866		
916 Cargoll, s-l, Newlyn	15 5 7 ..	—	13 15 0 ..	1 0 0 ..	Feb. 1866		
867 Cwm Eifin, t, Cardiganshire*	7 10 0 ..	—	21 18 0 ..	1 0 0 ..	Oct. 1866		
128 Cwmystwith, t, Cardiganshire	60 0 0 ..	—	322 10 0 ..	5 0 0 ..	April, 1866		
280 Derwent Mines, s-l, Durham	300 0 0 ..	—	167 0 0 ..	5 0 0 ..	Oct. 1866		
1024 Devon Gt. Consols, c, Tavistock*	1 0 0 ..	445	440 460 ..	1036 0 ..	6 0 0 ..	Sept. 1866	
358 Dolcoath, c, t, Camborne	128 17 6 ..	—	814 10 0 ..	1 0 0 ..	Aug. 1866		
6144 East Caradon, c, St. Cleer	2 14 6 ..	8	6 7 ..	14 5 6 ..	0 2 6 ..	July, 1866	
300 East Darren, t, Cardiganshire	32 0 0 ..	—	113 10 0 ..	2 0 0 ..	May, 1866		
128 East Pool, t, c, Pool, Illogan	24 5 0 ..	400	384 10 0 ..	5 0 0 ..	Sept. 1866		
5000 East Rosewarne, c, t, Gwinear	25 15 0 ..	154 ..	0 10 0 ..	0 1 6 ..	Jan. 1866		
1906 East Wheal Lovell, t, Wendron	3 9 0 ..	112 ..	7 6 10 ..	2 7 6 ..	May, 1866		
2800 Foxdale, t, Isle of Man*	25 0 0 ..	—	69 0 0 ..	0 10 0 ..	Oct. 1866		
5000 Fresh Mills, t, Christow	3 18 6 ..	354 ..	2 2 1/2 ..	3 5 6 ..	0 5 0 ..	Feb. 1866	
1500 Great Laxey, t, Isle of Man*	4 0 0 ..	20 ..	17 1/2 18 ..	5 5 0 ..	0 10 0 ..	Sept. 1866	
5908 Great Wheal Vor, t, Helston*	40 0 0 ..	26 ..	20 1/2 21 1/2 ..	10 10 0 ..	0 10 0 ..	Sept. 1866	
1024 Herodsfoot, t, near Liskeard*	8 10 0 ..	35 ..	30 34 ..	37 10 0 ..	1 10 0 ..	June, 1866	
6000 Hindston Down, c, t	5 10 6 ..	—	—	0 10 0 ..	0 5 0 ..	April, 1866	
4000 Lisburne, t, Cardiganshire, Wales	18 15 0 ..	—	470 0 0 ..	3 0 0 ..	May, 1866		
9000 Marke Valley, c, Caradon	4 10 6 ..	458 ..	4 1/2 4 5/8 ..	8 7 0 ..	0 2 0 ..	July, 1866	
3000 Minera Boundary, t, Wrexham*	1 0 0 ..	—	0 13 0 ..	0 3 0 ..	Mar. 1866		
1800 Minera Mining Co, t, Wrexham*	25 0 0 ..	—	160 170 ..	20 8 0 ..	4 5 0 ..	Aug. 1866	
40000 Mwyndy Iron Ore*	3 5 0 ..	—	—	0 6 6 ..	0 2 6 ..	Mar. 1866	
6000 Pant-y-Glen, s-l	20 0 0 ..	—	—	10 per cent.	May, 1866		
200 Parys Mines, c, Anglesey*	50 0 0 ..	—	157 0 0 ..	0 5 0 ..	Jan. 1866		
1120 Providence, t, Uny Lelant	10 6 7 ..	27 ..	20 25 ..	81 7 6 ..	0 10 0 ..	Aug. 1866	
512 South Caradon, c, St. Cleer	1 5 0 ..	—	534 10 0 ..	5 0 0 ..	Sept. 1866		
6000 South Darren, c, t	3 6 6 ..	—	—	0 5 6 ..	0 2 6 ..	June, 1866	
6000 South Fins, t, Pool, Illogan	9 0 0 ..	12 ..	10 11 ..	15 1 0 ..	1 0 0 ..	Jan. 1866	
30000 South Wheal Seton, c, Camborne	— ..	65 ..	58 60 ..	12 7 6 ..	2 0 0 ..	Aug. 1866	
40000 West Wheal Seton, c, Camborne	45 10 0 ..	140 ..	130 135 ..	45 0 0 ..	8 0 0 ..	Aug. 1866	
60000 Wheal Bassett, c, Illogan	5 2 6 ..	85 ..	80 85 ..	622 ..	0 1 0 ..	Oct. 1866	
1024 Wheal Clay, t, c, Devon	20 0 0 ..	—	308 0 0 ..	0 1 0 ..	Mar. 1866		
4255 Wheal King, t, St. Agnes	5 4 6 ..	—	—	2 19 0 ..	0 1 0 ..	May, 1866	
2000 Wheal Rose, St. Agnes	— ..	15 ..	—	0 0 0 ..	0 1 0 ..	Feb. 1866	
396 Wheal Seton, c, t, Camborne	58 10 0 ..	170 ..	155 160 ..	226 15 0 ..	5 0 0 ..	April, 1866	
1040 Wheal Trelawny, s-l, Liskeard*	5 17 0 ..	—	54 0 0 ..	0 6 0 ..	0 8 0 ..	June, 1866	
17000 Wicklow, c, t, Wicklow	2 10 0 ..	24 ..	23 1/2 23 1/2 ..	15 11 0 ..	0 11 0 ..	Mar. 1866	

BRITISH MINES WITH DIVIDENDS IN ABEYANCE.

1055 Craddock Moor, c, St. Cleer	10 18 0 ..	—	—	7 12 0 ..	0 4 0 ..	June, 1866
1200 Bryn Gwyn, t, Mold*	9 0 0 ..	—	—	3 3 6 ..	0 13 6 ..	Aug. 1866
2880 Clifford Amalgamated, c, Gwen	31 0 0 ..	14 ..	9 9 1/2 ..	25 6 0 ..	0 10 0 ..	June, 1866
6000 East Brea, c, Redruth	3 15 0 ..	3 ..	2 2 1/2 ..	0 5 0 ..	0 5 0 ..	June, 1866
20000 Mining Co, of Ireland, c, t, d	7 0 0 ..	—	21 1/2 ..	—	—	July, 1866
6000 New Birch Tor and Vitifer Cons, t	1 6 6 ..	—	—	0 13 0 ..	0 2 0 ..	Oct. 1866
6000 West Bassett, c, Illogan	1 10 0 ..	—	—	26 14 0 ..	0 5 0 ..	July, 1866
1024 Wheal Exmouth, t, Christow	— ..	—	—	—	0 2 6 ..	Oct. 1866
1024 Wheal Mary Ann, t, Menheniot*	8 0 0 ..	10 ..	11 12 ..	59 17 6 ..	0 10 0 ..	Mar. 1866

FOREIGN DIVIDEND MINES.

15600 Cape Copper Mining*	7 0 0 ..	—	9 1/2 10 ..	2 12 6 ..	0 10 0 ..	April, 1866
1500 East Indian Coal, Calcutta	10 0 0 ..	—	—	—	—	
25000 Fortuna, t, Spain*	2 0 0 ..	21/2 ..	—	1 5 4 ..	0 2 0 ..	Oct. 1866
10000 Gonnessa, t, [5000 £25 pd., 5000 £22 pd.]	— ..	—	—	7 1/2 per cent.	per annum	
15000 Linares, t, Spain*	3 0 0 ..	—	—	11 6 4 ..	0 5 0 ..	Jan. 1866
9275 New Wildberg, t	2 0 0 ..	—	—	0 12 0 ..	0 2 0 ..	Aug. 1866
50000 Panifico, c, t, France	3 0 0 ..	34 ..	34 ..	10 per cent.	Yearly	
10000 Pontigband, t, France	20 0 0 ..	—	—	2 19 8 ..	0 16 8 ..	Dec. 1866
97500 Port Phillip, c, China	1 0 0 ..	78 ..	1/2 34 ..	0 15 6 ..	0 1 0 ..	July, 1866
20000 Scottish Australian Mining Co, t	1 0 0 ..	—	—	0 1 0 ..	0 0 9 ..	May, 1866
11000 St. John del Rey, Brazil*	15 0 0 ..	50 ..	46 48 ..	68 15 0 ..	4 0 0 ..	June, 1866
50000 Victoria (London) [25000 £1 pd., 25000 £28. pd.]	1 0 0 ..	—	—	0 9 0 ..	0 1 0 ..	Jan. 1866
40000 West Canada Mining Company*	1 0 0 ..	—	—	0 19 6 ..	0 2 6 ..	May, 1866

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000 Alten and Quenangen United, c	4 10 0 ..	—	—	4 5 0 ..	0 15 0 ..	Nov. 1853
10000 Australian, c, South Australia	7 7 6 ..	—	—	0 2 0 ..	0 1 0 ..	June, 1866
2464 Burma Burra, c, Australia	5 0 0 ..	—	—	325 0 ..	0 50 ..	Dec. 1866
10000 Cobre Copper Company, c, Cuba	40 0 0 ..	5 ..	2 1/2 3 1/2 ..	101 0 ..	1 ..	Jan. 1866
10000 Copiado Mining Company, Chile	18 0 0 ..	—	—	6 18 0 ..	0 10 0 ..	Nov. 1862
10000 Don Pedro No. del Reg. Brazil*	14 0 0 ..	—	—	0 9 0 ..	0 9 0 ..	Dec. 1863
70000 English and Australian, c	2 10 0 ..	—	—	1 12 0 ..	2 0 0 ..	Aug. 1864
25000 Gen. Mining Assoc, Nova Scotia	20 0 0 ..	21 ..	19 21 ..	21 0 0 ..	1 0 0 ..	June, 1864
68000 Kapunda Mining Co, Australia	1 0 0 ..	—	—	0 12 0 ..	0 1 0 ..	June, 1864
10000 Lusitanian (Portugal)	2 10 0 ..	—	—	1		